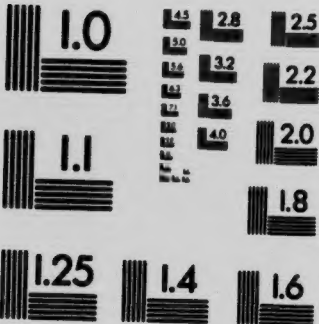


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HOW BRITISH COLUMBIANS ENJOY THEIR CLIMATE.—Regatta on Victoria Gorge—"an Arm of the Pacific Ocean."

BRITISH COLUMBIA'S

SUPREME ADVANTAGES

IN CLIMATE, RESOURCES, BEAUTY, AND LIFE

BY—M. B. COTSWORTH, F. G. S.

British Columbia, as the Western Province of Canada, has the unique position and unrivalled advantage of possessing the whole of the Western Slope of the vast Canadian Watershed, from the dividing peaks of the Rocky Mountains to the Pacific Coast; with its bracing atmosphere, bounteous rainfall, giving luxurious vegetation, teeming rivers and lakes, providing immense water power available for manufacturing, etc., purposes nearly all over the Provincial area, as shaded upon the Sketch Map of Canada, shown upon the end Exhibit I.

It contains an area of 395,000 square miles, or more territory than Great Britain, Ireland and Germany combined; and amongst its population of nearly 300,000, engaged in developing its vast mineral, timber, agricultural, fishing, and other abundant resources, has a larger percentage of British settlers than any other Province; because here they can find continuous prosperity and enjoy healthy family life, whilst extending their life-time under brighter and more invigorating climatic and business conditions than their dear homefolk can ever experience, even during the brightest years in Britain.



ANOTHER GLIMPSE OF THE PACIFIC.
Vancouver Island on the West Coast of Vancouver Island.



MOUNT BAKER.—80 miles away in the United States, as distinctly seen from Victoria through the clear atmosphere across the 40 miles width of sheltered Straits and peaceful islands.

THE ADVANTAGES OF CANADA'S BRACING CLIMATE AND DEVELOPING LAND.

The fact that Lord Strathcona, the active Agent-General for Canada, though now in the 90th year of his age, is jauntily crossing the Atlantic with the members of the British Association to attend the Winnipeg meeting this year, draws attention to the significant fact of the long life and sustained vigour of prominent Canadians; as did the death of Senator Wark, forty years ago, at the age of 101, after having continued active public work when more than 100 years old.

LONGER AND MORE ENJOYABLE LIFE:

Amongst the number of prominent octogenarians may be noticed Lord Mount Stephen, the Honourable R. W. Scott, Sir Charles Tupper, Sir George Drummond, Sir Sandford Fleming, and others, whose activities are being so remarkably extended beyond the age of "four-score years," that we are led to enquire how this remarkable vigour of Canadians is being developed.

The answer appears to be, that it is largely due to the invigorating climate of the Dominion, which, according to nature's irrevocable law is here developing a hardy and stalwart race, because the surrounding conditions of life are climatologically most favourable to the development of vigorous health.

That is borne out by the writer's experience as Chairman of the Public Service Commission, during the grading and re-classification of more than 500 Civil Servants of British Columbia, individually according to their ability and fitness for the duties required of them

by the Government, on the substitution of the old Party system of "patronage" appointments, by that of competitive and independent merit.

The most remarkable feature of that investigation is the longevity of the clerks, some of whom when over 70 years of age, and even over 80 years old, could not be fairly classed as physically inefficient, because their duties were well performed. Their handwriting remained firm, and vigour was sustained in a decidedly larger proportion of cases than in England, as experience obtained through the numerous membership of Superannuation Funds there clearly demonstrates.

That is so manifest in British Columbia that it is actuarially necessary to specially discount the annuities purchasable by any capital sum, at every age, from the "British Life Annuity Tables" to meet the extending length of the "expectation of life" of annuitants in these health-giving regions of Western Canada, where doctors are seldom wanted, and annuitants live to draw annuities longer than in England, so that it does not pay insurance companies to push the annuity business in Western Canada.

HEALTH IS THE GREATEST CONSIDERATION IN ALL WELL-ORDERED LIVES:

The well-proven advantages of the most bracing climates are becoming more evident to practical people every year. All the best medical authorities advise us to maintain our health unimpaired by enjoying life in home



VANCOUVER.—The rapidly developing **TERMINAL CITY** and **PORT**
its Population at the Census of 1901 was 20,133, is now about 90,000, and will soon largely exceed 100,000.

locations within the most bracing latitudes, or where that is not within our means of life, then to live on the higher ground of our district and spend holidays in the higher altitudes of the bracing mountain air to recuperate our energies.

The increasing numbers of citizens from New York, Philadelphia, Toronto, and other Eastern cities, who annually travel the vast distance of 6,000 miles on the round trip to the Rocky Mountains, find themselves amply rewarded by the renewal of health and braced-up nerve they gain to sustain them happily in the van of progress. They yearly look forward to that trip with increasing delight, knowing that they can always find different charming scenes amidst which they can freely breathe the healthful, invigorating mountain air.

In every well-ordered life, the first and ever-continuing consideration should be to choose the healthiest surroundings to develop the fullest individuality, and not remain mere creatures of circumstances around our place of birth—dear as that may be cherished through the joyous reminiscences of childhood and early home-life.

GREATER SCOPE FOR YOUTHFUL ENERGIES:

As fuller life matures we need the greater scope which Western Canada's almost limitless fertile expanse can best supply in the vast Territories north and west of Winnipeg, extending, approximately, 1,500 miles west and 1,500 miles north. That contains 2,250,000 square miles—more than half the size of Europe—now budding forth into prosperity, as the fertile "Wheat Belt" is advancing northwards at the rate of about 20 miles per year, through that most permanent basis of prosperity—

agricultural development, aided by nature's great gravitational trend of climatic change, slowly but surely improving its climate, thus developing milder seasons throughout Canada—especially in the West, as will be explained later.

CANADA'S IMPROVING CLIMATE:

That the climate of Canada improves in a remarkable manner as we journey westward, is the experience of impartial observers, and proved by the emphatic upward trend of the full red lines of approximate **EQUAL MEAN DAILY TEMPERATURE** shown upon the accompanying "Climatic Sketch Map," which are shown as recorded by the Meteorological Service of the Dominion of Canada on Map 26B, of the "Atlas of Canada," issued by the Department of the Interior, to which the writer has added the bolder figures, denoting the remaining days per year on which the average shows that continuous frost prevailed. Those lines are therefore impartial so far as British Columbia is concerned, wherein they disclose the extraordinary fact that the records denoting the equal mean daily temperature above 32 deg. Fahrenheit rise from the latitude of British Columbia's southern boundary to its northern limit, about 900 miles further north.

The 250 days of the year line sweeps westward along the Canadian Pacific Railway past Lake Superior and Winnipeg, on to about Regina, whence it sharply trends upwards by Edmonton, in a north-westerly direction, to the north of British Columbia, denoting a warmer climate on the average, along and west of that line, as the more vertical 300 and 350-day lines emphatically prove.



Sunrise dispelling the mist in the heart of the Selkirk Mountains.

BENEFITS OF THE WARM JAPAN CURRENT:

That increase in temperature and fertility is mainly due to the warming influences of the Japan current, which very materially benefits the climate of British Columbia, in like manner as the warm Gulf Stream has so long proved to be highly beneficial to the British Isles and Western Europe.

BRITISH COLUMBIA THE PACIFIC COUNTERPART OF GREAT BRITAIN:

The identical latitude and size of Great Britain is evidenced on the "Sketch Map," where Great Britain is inset in white as the heart of the British Empire, within the Pacific sloped outline of British Columbia, which resembles the letter K, as becomes this loyal and most prosperous Province of Our King.

The centre of British Columbia being leveled lower than the north and south, more freely admits the warming Pacific breezes through the vast fertile area around the Grand Trunk Pacific Railway line from Prince Rupert, through the bountiful Peace River country into Northern Alberta.

Immediately north of the 250-day line, the remaining 115 days of the year appear, by the average, to have remained below freezing point and are therefore denoted bolder as days of frost.

The other lines for 300 and 350 days, together with Vancouver Island's and Victoria's 363 days by like deductions from the 365-day year, bring out the most significant climatic fact, that practically along the same latitude of 50 deg. through Western Canada, the number of days averaging below 32 deg. mean temperature

increases Eastward as we read along that latitude, from 2, 15 and 65, to 115 days at the points where that parallel crosses the red lines.

These should not be considered as more than roughly approximate indications of the general climatic trend, which give to British Columbia its charming variety of healthful climate.

ISOTHERMAL LINES OF EQUAL MEAN TEMPERATURE:

The dotted red isotherm of 60 deg., summer temperature, and the broken red line of 40 deg., winter temperature, are, by the courtesy of Mr. Jas. W. McCurdy, taken from an instructive paper on Victoria's climate, which he read before the Natural History Society of Victoria, on November 19th, 1906, which demonstrates the unique climatic advantages enjoyed by the people of Victoria—where the ideal Summer weather's range along the 60 deg. isotherm is crossed by the ideal Winter isotherm of 40 deg., with the result that, approximately 363 days of the year each average more than 32 deg. mean temperature.

That does not imply that there are only two days when the thermometer falls below freezing point, but two days when the mean temperature between the highest registered for the day and the lowest recorded during the night averages less than 32 deg. Fahr.

FACTORS GOVERNING VICTORIA'S DELIGHTFUL CLIMATE:

The chief factors collectively producing the ideal climate of Victoria and the southern end of Vancouver Island are:—

1st. The influence of the Earth's rotation and shape of the Pacific shores, which, together, deflect the Japan Current across to British Columbia.



BRITISH COLUMBIAN INDIANS GATHERING HOPS.



and. The insular position of Vancouver Island, with the very uniform temperature of the Pacific water around and to the westward.

3rd. Prevailing westerly breezes tempered by the Pacific, and having their excess of moisture precipitated by mountains ranging about 30 to 50 miles around, so that but little rain reaches Victoria.

4th. As the summer heat develops over Central Canada, the heated air there ascends, causing the warm Pacific air south-west of San Francisco to be drawn as a wind across Washington State, where the Olympic Mountains (seen behind the Parliament Buildings, shown on the cover hereof), catch the moisture, check the wind, and cool the breezes as they pass over the snow-covered peaks ranging—5,000 to 6,000 feet high—about 40 miles away. This results in cool, dry breezes, reaching Victoria during the summer, when consequently there is abundant sunshine to brighten the lives of its people and their ever-increasing number of guests.

Thus Victoria has the supreme advantage of enjoying the most ideal climate in the World, which is continuously bracing during both summer and winter.

SUPREME CLIMATIC ADVANTAGES OF BRITISH COLUMBIA:

Reference to the dotted summer isotherm of 60 deg., shows the supreme climatic advantage enjoyed by British Columbians, as that ideal, bracing summer climate is broadly averaged throughout the 800 miles direct length of British Columbia.

The climatic factors operating to produce that unparalleled effect are:—

1st. The great absorption of the summer sun's heat by the almost treeless prairie Territories of the Alberta, Saskatchewan and Manitoba Provinces, accumulates along the relative depressions of the Peace River, Liard River and Yukon River basins.

2nd. The Rocky Mountains shelter the southern part of British Columbia from that spreading heat.

3rd. The cooling breezes from the Pacific Ocean force their north-easterly way through the wide sea arms around Vancouver Island, across the Province, as may be seen by the inward curves graphically indicated by the isothermal lines printed in red upon Map No. 6.

4th. But not least, the abundant forest growth of rich timberland, clothes British Columbia with a protective growth of great value in toning down extremes of both summer and winter temperature, and thus making it the healthiest Province for permanent home life.

Young and middle-aged men are willing to brave the severe winters on the Prairies in order to earn sufficient to retire upon. Then they aim at progressing Westward to enjoy the more ideal climate of British Columbia.

THE NORTH-WEST TREND OF MIGRATION FROM THE UNITED STATES:

The extraordinary flow of migration from the United States into Western Canada is in the direction of the more healthful climate prevailing in the loop-like area, indicated between the 250 and 350-day coloured-lines of equal mean temperature shown upon the Climatic Sketch Map.



SHEEP FARM, NEAR LILLOOET.



The fact that about 180,000 people have this year migrated from Montana, Dakota, Nebraska, Iowa and other States of the storm-swept north-central portion of the United States, speaks volumes for the cuteness and perception of the Americans, who, being intent upon making progressive prosperity, "pull up their homestakes" and go straight for the best land they can find. That, they have found by experience, is located West of the 350-day line, where choicer weather with better assurances of reliable crops prevail.

**WESTERN CANADA HAS BETTER CLIMATE THAN THE
CENTRAL-NORTHERN STATES:**

That rapidly increasing migration of so many of the best experienced farmers, ranchers, miners and traders from the more central-northern portions of the United States, is the best possible testimony to the superiority of Canada's Western Climate when compared with the more storm-swept, extreme, and trying climate of the States near to the Canadian Boundary.

TRACK OF THE NORTH AMERICAN STORMS:

The approximate track of the trying and devastating storms, moves near the 300-day line shown on the Climatic Sketch Map from the point about opposite to where the 350-day line ends, and then follows about the course marked by the "Mean 40 deg. Isotherm for the Year," which averages the whole year's temperature at each point along that line—here ranging about midway between the 60-deg. summer and 40-deg. winter isotherms.

The oscillations of the extremes of temperature between those summer and winter isotherms are more

than twice as great, when measured across from the end of the word "summer" to the beginning of the word "winter," as when compared with the parallel line measured across British Columbia, diagonally from Vancouver Island to the north-east corner of the Province; consequently the climatic disturbance caused by the alternations of the seasons is most violent in the northern zone of the United States adjoining the "Mean 40-deg. Isotherm for the Year," which traverses through the States of Montana, Dakota, Nebraska and Iowa, by Chicago, etc., on to New York and the New England States, which, owing to the eastward blow of the prevailing winds, do not derive such great climatic benefits from proximity to the sea as the Pacific States enjoy, hence the isotherms do not rise as high on the Atlantic seaboard.

Through most of that turbulent zone through which the blizzards sweep, the hardy people experience more mixed weather than they like; because they happen to live half-way between those winter and summer isotherms, and near the 45th parallel of latitude, which emphatically registers the midway range of the 90-deg. latitude between the icy-cold of the North Polar regions and the tropical heat of the Equatorial Zone: whereas the Pacific States of California, Oregon and Washington, in corresponding latitudes, derive from the Pacific Ocean milder climatic advantages, similar to those enjoyed by British Columbians.

Those maritime advantages account for the upward trend of the 40-deg. isotherm for the year, being deflected above the Pacific States—up the sheltered coast line



On the Trail

MINING PROSPECTORS "ON THE TRAIL" up in CARIBOO.

of British Columbia—and the fact that the States of California, Oregon and Washington, being endowed with the best climate in the United States, ranking nearest to that of British Columbia, which, through having a more bracing northern atmosphere, is gradually becoming recognised as the healthiest climate on the American Continent, and will ere long be rightly acknowledged as the most desirable climate in the World.

WINTERS AND STORMS LESS SEVERE IN WESTERN CANADA:

To those who, like the writer, have experienced the full blast of the snow-driving blizzard along that zone in mid-winter, contrasted with the light snowfall and bright sunshine prevalent in Alberta at the same time of year, it is easy to understand why the Americans are flocking over and becoming good Canadian citizens.

We were 3½ days snowed-up in the train at Manning, in Nebraska, with the engine frozen solid over with ice, whilst the dry pulverised snow, blown at the rate of 67 miles per hour, sifted through the double windows and curtains like flour, half across the car, whilst trains on the Canadian Pacific Railway, running parallel 600 miles further north, ran regularly, as the Canadian snow thins out west of Regina, so that along the 500 miles on to the Rocky Mountains the farmers leave their cattle to feed themselves on the prairie grass throughout the winter and seldom put up sheds to protect them.

ATTRACTIONS OF THE GOLDEN WEST:

Yet even those favoured Prairie farmers press on to the West Coast and British Columbia fruit ranches when they have won their independence.

"AWAY BACK EAST" is the graphically pointed expression of the enterprising Western Canadian who, having felt the greater cold and snowfall during residence in Manitoba and the still more extreme cold and excessive snow, mingled with the damper atmosphere of Ontario, Quebec and the Eastern Provinces from which they progressed westward do not want to go back there to live, though they enjoy going for a holiday to see the "old folks at home."

WISE MEN COME FROM THE EAST:

The astute farmers in the East profitably sell out their partially worked-out farms to new comers, and with the proceeds move to better land in the West, knowing from the best advice of their pioneer western friends, or personal experience gained during one of the "Home-seekers' Excursions," run by the Canadian Pacific Railway encouragingly during the Spring-time, that the Provinces of Canada improve from the home-makers' point of view in accelerating ratio as we progress through Quebec, Ontario, Manitoba, Saskatchewan, Alberta to British Columbia.

The prospective farmer, if he has not a sufficient reserve of money to live upon during the first winter, may choose the more immediate advantage of locating a homestead in Alberta, where he can begin immediately to plough the open prairie land; whereas he would need more capital to farm with advantage in British Columbia, where the cost of clearing the rapidly growing trees is heavier—though when the land is cleared the crops, like the trees, grow more abundantly in the many localities sheltered within the numerous well-watered valleys.



PEACH ORCHARD, near PEACHLAND, on the OKANAGAN LAKE SHORE.

**THE WISER MEN COME DIRECT TO BRITISH COLUMBIA TO
ESTABLISH PERMANENT HOMES:**

The wiser men who have been able to accumulate savings sufficient to establish their homes where life is best worth living, and where their families will have the fullest opportunities to develop their energies and win prosperity and happiness, come because beyond farming, British Columbia affords the additional advantages of the rapidly extending mining, timber, fruit, fishing, etc., business, in addition to the progressive benefits arising from its maritime position, which so markedly confers the supreme climatic advantages and scenic enjoyments in which British Columbians delight.

A GOOD CLIMATE ATTRACTS THE BEST SETTLERS:

Now that the facilities for the removal of families are so great all over the World, and land is still available through most of Canada, where the through-fares are so nearly equal in cost, the comparative merits of the climates experienced by the friends of prospective settlers in the respective Provinces is yearly becoming more vital in determining the choice of homestead locations by the more intelligent immigrants. The colder winters in Central and Eastern Canada explain why people are spreading further westward each succeeding year, whilst so much of the land in the Central Provinces remains open for settlement.

Three instructive sights impressed the writer during more than 10,000 miles of investigating travel through Canada last year.

THREE INSTRUCTIVE SIGHTS:

1st. At Chaplin, 34 miles west of Moosejaw, the old "Buffalo trails" and "wallows" mark the tracks the herds made during their yearly migrations.

2nd. Near there were seen three antelopes chafing up and down outside the new settlers' barbed-wire fence, which barred them from following their instinct by migrating northwards with the seasons.

3rd. The evident deterioration of the several Indian tribes visited, who were losing life and vigour, largely because free-feeding had led them to forsake their good, old custom of following the buffaloes, etc., by migrating northwards as summer advances.

The "Stoney Indians" who still hunt 200 miles north from their Reserve were a marked exception, and the more northerly Indians were found to be more vigorous, mainly owing to their invigorating climate encouraging active life.

Assuming that the reader has travelled through Eastern Canada by either of the Canadian railways to Winnipeg, and is proceeding thence through the Rocky Mountains to the Pacific Coast, we will now describe, briefly, some of the more interesting features of the journey, beyond those described with greater detail in the useful "Westbound Edition" of the "Annotated Time Table" which the Canadian Pacific Railway Company gives freely to its patrons, of whom the reader is assumed to be one.



BONNINGTON FALLS, on the COLUMBIA RIVER, between NELSON and ROBSON.

JOURNEY FROM WINNIPEG TO THE ROCKY MOUNTAINS.

ACROSS THE PRAIRIES:

Travelling across the undulating 1,000 miles of prairie west of Winnipeg affords little change of scene. beyond the thousands of scattered homesteads with cattle and agricultural operations in view, though the people attracted to the stations are interesting.

The steady rise of 4,000 feet is so gradual that the traveller scarcely realises that increasing elevation until coming within sight of the Rocky Mountains; though it is very evident when we examine the "Profile of the C. P. R." printed on Exhibit 2.

Regina as the capital of Saskatchewan has attractions. The buffalo "trails and wallows" near Chaplin should be looked for. Medicine Hat is noted for its cheap, abundant and natural gas. Gleichen is interesting for its encampments of Blood Indians. Calgary is an important commercial centre and rising city. At Morley the celebrated Stoney Indians preserve their vigorous hunting habits and are well worth seeing. Banff is surrounded by attractive scenery, hot springs, and the National Park with its herds of Buffalo, etc.

ENTRY INTO BRITISH COLUMBIA:

But the great delights of the journey begin when we enter British Columbia at the "Great Divide," 5,321 feet above sea-level, where the adjoining mountains range about twice that height, and furnish sublime scenery of the most majestic character.

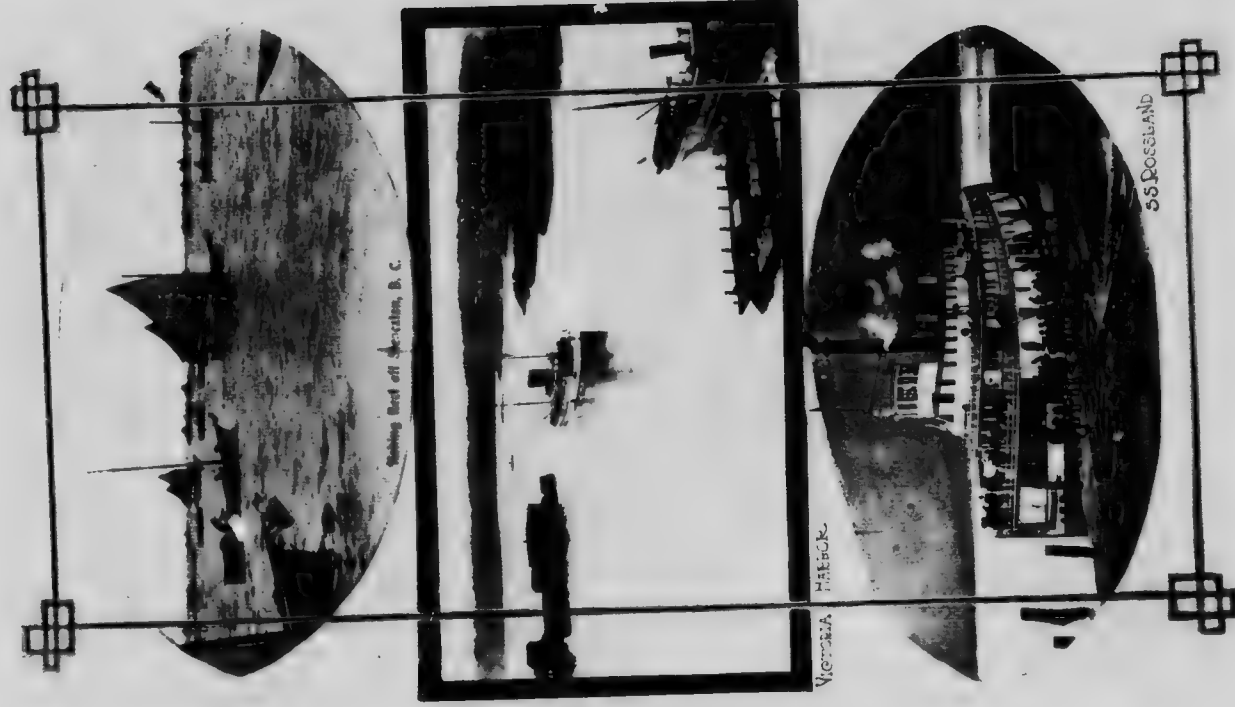
THE SPORTSMAN'S PARADISE:

British Columbia has so many attractions of such a varied nature that no matter what a man's particular vocation or hobby may be, whether he be a scientist, interested in commerce, a mere pleasure seeker looking for a change, or a nimrod devoted to outdoor sports, or an invalid in search of a new lease of life, he can be satisfied in this country.

Throughout the whole Province the scenery is delightfully varied, and in most parts of the Rockies and Selkirks, and in many places in the Cascades, it is grand beyond description. The three above-named ranges are the main ones of the country and they offer a fine field for the geologist, botanist, alpine climber, and for shooting and fishing are unsurpassed by any other part of the World.

It would be impossible to enumerate in detail, except by means of a large book, the objects of interest and the fields for study, so the chief places of interest that will be passed, or are easy of access, between Field (the first station in British Columbia) until Alaska is reached, will be mentioned with a few notes as to how time could be best spent there.

The descent begins rapidly from Stephen down to Hector through the deep gorge and sublime scenery of the Kicking Horse Pass, skirting the river and beautiful Wapta Lake, etc., on to Field.



FAVOURITE MODES OF TRAVEL IN BRITISH COLUMBIA.

FIELD.—After descending 1,257 feet within ten miles beyond the "Great Divide," we reach Field, where excellent hotel accommodation, amidst some of the finest scenery and most bracing atmosphere in the World, invites us to stay.

Around us are ranged the mighty Rockies with every desirable attraction for the tourist. We decide to spend at least a day here.

Above us Mount Stephen towers, on the shoulder of which is the "Fossil Bed" rich in trilobites, and round its other shoulder is the great lead mine, reminding us of the vast mineral wealth awaiting future development in the massive mountains of the Province.

**THE BEST DAY'S WALK IN THE WORLD,
THROUGH THE VALLEY OF THE YOH0:**

If only one day can be spared, we breakfast at 6 a.m., and starting about 6:30, walk along the new road constructed by the Provincial Government, enter the enchanting Valley of the Yoho, where the forest, lake and river scenery, with glacier-crowned mountains 10,000 to 12,000 feet high majestically edging the sky-line on both sides, add an unexpected charm to life until we arrive at the beautiful "Takakkaw (meaning beautiful) Falls," which in great volume drop down 1,200 feet, landing in clouds of ever-varying spray.

This is as much an attractive district for the geologist and botanist as for the tourist, but we must not linger, but press on through the charmingly sheltered trail to the "Twin Falls" and other delightful waterfall scenes, up to "Observation Point," where we are bountifully rewarded by seeing the magnificent Yoho Glacier,

set as a huge gem-like crystal at the far end of the valley, and gliding round the "Nunatak" shoulder of the mountain imperfectly pictured in the accompanying illustration.

Two features of outstanding importance attract our attention, even though we are some miles from the glacier. 1st. The heart-shaped "Nunatak," round which the slow-moving glacier ice formerly ground its way till it melted in the warmer valley below, is seen in the foreground, and round its top left edge, we can plainly observe the smooth, bare rock which the former passing ice ground down whilst its heavy mass was thicker than now and covered the rounded expanse of the Nunatak's edge marked X.

2nd. Further to the right at the foot of the mountain peak we can see the canal-like grooves scooped out by the eroding ice.

Still more instructive is the view we get from the point where the nearer slope foots the white gravel moraine below the Nunatak, denoted "North-end" of the 474-foot base line upon Mr. Arthur O. Wheeler's accurate map of the Yoho Glacier on Exhibit 3, showing the line of observation plates and the measure of the July 1906 to 1907 year's flow of the ice-tongue, which thus annually averages about 124 feet, or rather more than 4 inches per day over the whole mass.

But the photograph taken from that point and reproduced above the map as Illustration No. 1, proves that, since the full page photograph was taken, the ice has melted back faster than its rate of flow, and by the year 1908 had retreated up the rock-floor which we now



YOHU GLACIER, viewing the ICE flowing CRESCENT-LIKE around the "NUNATAK."



see on the left of the Nunatak was striated (scratched), grooved and fluted by the downward thrust of the heavy ice.

Further, the whole ice mass has been melted down thinner by the slowly warming climate, as the striated rock cliffs now ranging up to nearly 400 feet on the mountain side beyond the ice-tongue, manifestly prove that not very long ago the glacier filled the valley to 400 feet higher, grinding down along those ice-smoothed cliff edges seen below the trees, from which the progressive climatic change has melted it down and caused recession.

Illustrations 2 and 3 below the Map, demonstrate the extent of both the recession of the ice-tongue and the thinning down of the whole glacier's thickness during but the one year from July 1907 to July 1908, although, as Mr. Wheeler carefully remarks on page 275 of the "Canadian Alpine Journal" for the year 1908:—

"These evident facts appear somewhat peculiar in view of the unusually large amount of snow that fell in that locality during the winter of 1906-07."

The greater weight of snow would have helped to press the ice-tongue forward, had all other factors of climate remained equal during that year when compared with others.

All the foregoing emphasise the all-important fact of the Glaciers of North America being steadily melted down by the improving climate, as we shall later find more conclusively demonstrated on Exhibit 4.

The greatest shrinkage was 43 feet in the year, near the source of the Yoho River seen gurgling from under the ice-tongue; but as the average recession was 20 feet

it has been shown, for proportional effect, by the thick 20-foot line which the writer has added round the fore-foot of the ice to illustrate the year's recession according to the scale of feet.

We cannot close this brief description of some of the wonders of the Yoho Glacier without recording our high appreciation of Mr. Wheeler's photo-grammetric survey, and his admirable work describing the glorious Selkirk District of which the incomparable Yoho Valley is but a small part.

His method is the best for surveys of this nature, and reflects great credit upon that part of the Dominion Survey for which he is responsible. Few Canadians realise how much this Dominion and Province is indebted to Mr. Wheeler for the great good he has done by his zealous efforts as President of the Canadian Alpine Club, in opening up the glories of the Rocky and Selkirk Mountains so that yearly they now increasingly attract and invigorate many of the best people in the World.

The joyous life they live whilst camping in and climbing from the lake-studded and torrent-worn valleys of British Columbia, leads to that never-failing longing to come back to these enlivening and enchanting scenes.

The writer was privileged to join Professor Herschel C. Parker, of New York, on the first continuous one-day walk made from Field round the Yoho Valley, over Observation Point and the Burgess Pass back to Mount Stephen House. Though the less hardy tourists usually take that journey in separate day stages on horseback, we proved that its 35 miles can be briskly walked in one day. Business prevented our starting till nearly 9 a.m.,



SILVER FOX (*Vulpes vulpes argentatus*). Group in Provincial Museum, Victoria, B. C.



and the Yoho River being in flood caused delay in finding a log-jam crossing, so that we did not get back till late at night, having had to feel our way down the Burgess Pass Trail in the dark.

WESTERN AIR DEVELOPS FULLER LIFE AND ENERGY:

That walk proved most enjoyable and not too tiring, as the bracing atmosphere is so invigorating that it is easier to walk 35 miles there in summer than to walk say 12 miles in sultry Eastern cities.

At "Observation Point" we took a last look of the Yoho Valley with its entrancing waterfalls, rugged mountains, and saw the glaciers of Mount Balfour marking the Continental Divide across the valley, with the crescented "Yoho" at the end, and remembering its debris deposited terminal moraine of gravel and stones, were much impressed with the vast extent of the steep moraines we crossed on the trail above Emerald Lake—one of several mirror-like, green, clear lakes we saw. The countless, rounded stones, ground oval shape by the receding glaciers above, having formerly rolled their tremendous weights over them, clearly demonstrated how the boulders and stones found on the prairies, etc., were mostly formed.

The lovely views from Burgess Pass over the lakes, glaciers, peaks and valleys, and the charms of the whole day's walk will never be forgotten.

We must resume the railway journey at Field whence the train wends its way down the picturesque valley of the Wapta River, through which the milky waters from the Yoho, etc., glaciers flow down to Golden, where they join the majestic Columbia River.

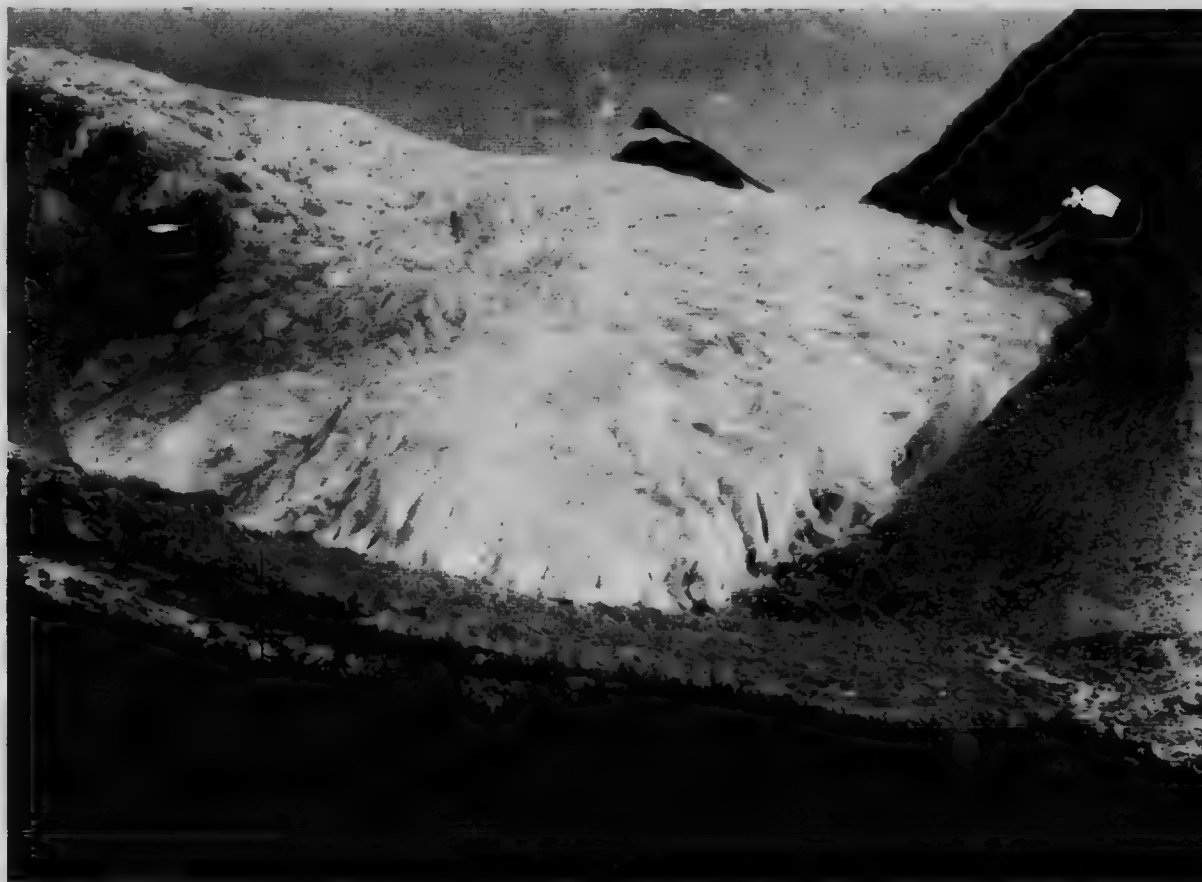
GLACIER:

The train stops for lunch at Glacier House, but wiser tourists decide to stay at least half a day to visit the Illecillewaet Glacier, illustrated on the adjoining photograph, and the wisest stay longer to visit the remarkable variations of the adjoining Asulkan Glacier, shown on the back cover.

The prior description of the Yoho suffices to explain the similar features of this most beautiful Glacial cascade, which has been most closely investigated by Mr. Geo. Vaux, Jr., of New York, whose excellent map of its "Tongue and Moraines," is, by his kind permission, reproduced and emphasised by the writer's bolder outlines shown on the left side of Exhibit 4, where the marked similarity between its shape and that of the Yoho, on Exhibit 3, can be seen at a glance.

The magnificence of surrounding scenery being aptly described in the "Westbound Edition of the C. P. R. Guide Book," enables us to devote more space to describe the less-known features of this iridescent and glistening pearl of the many glaciers in the Selkirk Range.

As we ascend the splendidly timbered and flower-bestrewn valley, we see delightful glimpses of the ice "seracs and crevasses" on the surface of the glacier, as we follow the well-beaten "trail" and step over the rustic bridges to where the bold cross-line on the large rock, near the border of the present clear part of the moraine, marks decisively the location of the glacier's ice-tongue, which we now see has receded about 1,000 feet in the intervening 21 years, or about 48 feet per annum, although the rate of the downward gravitation of the ice averages from 6 to 8 inches per day.



ILLECILLEWAET GLACIER and its MORAINES.

RATES OF RECESSION:

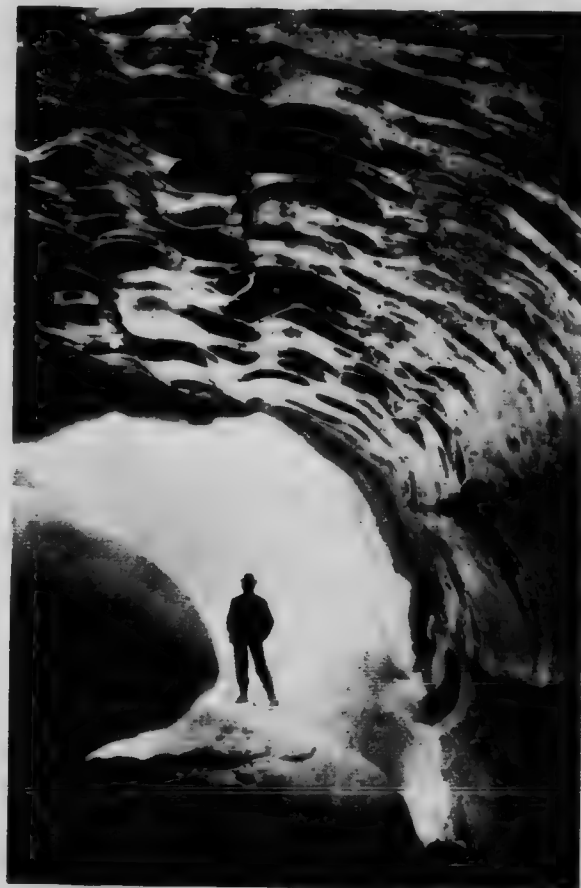
Between the 10 years, 1888 to 1898, the 500 feet of recession average 50 feet per year, because the ice was there flatter spread out. During the eight years between 1898 and 1906, when the whole tongue was more definitely measured each year, the recession of 216 feet averaged 27 feet per year in the directions graphically indicated by the arrows inserted by the writer, who also emphasised the outlines of the ice for the 1888, 1899 and 1906 years, etc.

Those rates of recession are faster than the Yoho, and are partly due to the steeper declivity down which the Illecillewaet Glacier flows, and partly to its getting thinner on the bed-rock now being bared more rapidly, as demonstrated on Exhibit 4.

The similarity between those two glaciers is most pronounced in the loop-like recession shown along the bed-rock to the right on both maps, in the direction of the impressive, naturally formed Illecillewaet "Ice-cave" which was always such a significant feature until it caved-in last winter.

NATURE'S UNFOLDING, DISCLOSED BY THE "ICE-CAVE":

The most significant feature of the Illecillewaet Glacier last year was the perfected form of its great natural "Ice-cave" that is partly shown by the accompanying half-page illustration, which, as we look outwards, very imperfectly displays on its right side the grooving and fluting of the ice as moulded by the intense gravitational pressure of about four square miles of thick glacier and snow-developing "Neve" above, thrusting the ice downwards over the remarkable grooved and fluted rock blocking the far end of the Cave.



ROOF of the ILLECILLEWAET ICE-CAVE, showing the grooving, and matrix-holes made by the roof-stones.



Ascending the Illecillewaet Glacier, B. C.

Amidst the "SERACS AND CREVASSES" of the GLACIER.

**NATURE'S UPPER AND NETHER MILLSTONES GRIND THE
ROCK TO MAKE THE LAND:**

As the massive ice ground over the end rock, the smaller boulders and stones which had been pressed into the under-part of the ice as it rolled down the cleft between Mount Sir Donald—10,662 feet high—and the Asulkan divide, ground over the rock like a ponderous planing machine, continuously working forward, reducing the rock to the powder we saw deposited in large flour-like masses below the interior rock, when all was frozen dry in mid-winter.

As the ice was relieved from pressure after passing over the rock, the boulders embedded in the roof of ice fell down, leaving their matrices (holes) exposed in the roof of the Cave, which has unfortunately since fallen in.

Not a tithe of its great object-lesson can be derived from the hand-cut cave made on the other side to show some of the beauties of the blue and green shadings of the ice.

As the warm spring weather comes on the ice melts and washes down the white, floury powder (a sample of which is in the Provincial Museum), into the lime-like wash that fills up between the stones on the edges of the rivulet, and washes down to the river and thence along the Fraser Valley to its fertile Delta, that, during ages past, has been constantly forming through the agency of these glaciers.

That gradual drifting of Glacial silt and material can be realistically seen as the train passes down the river side until we approach Vancouver.

Fortunately the rounded rock, seen snow-capped in the foreground, with others resting on the snow-covered bed-rock below, had fallen and left the interior rock-face clear-cut up to the ice-roof when the writer was privileged, during the winter of 1908, to visit the Cave in the good company of Mr. Flindt (now at the C. P. R. Stephen House Hotel, but then at Glacier House), who very obligingly acted as Guide over the pure white snow to that haven of interest. He also, as requested, induced Mr. Byron Harmon (the photographer of Banff, in Alberta) to take the stereoscopic pictures—which the reader can now obtain from Mr. Harmon—showing in relief the moulding of the over-sliding roof and sides thus partly preserved to view, as that wonderful sight into the interior workings of the glacier then met our gaze.

GOLDEN, in the Columbia River Valley between the Rockies and Selkirks, is a centre for mining and the timber industry; good farming land is located in this long valley, especially at the head of the river. A small steamer goes to Windermere Lake—a very interesting trip—with but limited accommodation. The stage travels to Windermere twice a week, a distance of 60 miles. Golden is a great out-fitting place for the nimrod; magnificent shooting, including moose, caribou (in the Selkirks), deer, goat, bear, and the world renowned "Big Horn."

For combined camping, fishing and shooting a most enjoyable trip is available up the Beaverfoot River by canoe, then to portage over to the Kootenay River, and thence down to Canal Flats, and back down the Columbia to Golden.



There are guides in Golden who undertake the trip and will furnish all the necessary outfit. Special guides for big-game hunting can be obtained at Golden and Windermere.

All non-residents are required to take out licences for shooting or fishing, the fees are: General licence, \$100; special licence, for one month, to shoot deer, goat and bear, \$25; licence to shoot bear in spring, \$25; bird licence for one week, \$5; angler's licence, \$5. The shooting season commences on September 1st, for big game. For birds, it varies.

REVELSTOKE.—Shortly after leaving Golden the Columbia River turns away north, after going some distance it turns south again and is crossed by the C. P. R. at Revelstoke, and a little farther south, opens out into the Arrow Lakes.

Close to Revelstoke are some very interesting caves well worth a visit. There is a fair hotel. Caribou shooting is fairly good within a short distance.

At **SICAMOUS JUNCTION**, on the Shuswap Lake, there is good trout fishing. The branch railway turns south to Vernon and thence by C. P. R. steamer down the Okanagan Lake. The Okanagan Valley is a great fruit-farming country and the Coldstream (Aberdeen) Ranche, near Vernon, is well worth seeing. The climate and scenery are splendid. A trip down the lake proves most enjoyable.

KAMLOOPS is in the "Dry Belt," and famous as a health resort—especially for those with lung troubles. The large Sanatorium at Tranquille can be seen across the lake after leaving Kamloops. There are some large

cattle ranches. The Pioneer Poultry Ranch designed with a capacity to produce 100,000 poultry per year can be seen as the railway passes through it. A stage goes from there to Nicola. A good all-round farming country.

There is excellent trout fishing in the neighbourhood—generally at its best in July.

At **SAVONAS** there is good trout fishing close by, and excellent duck and geese shooting a few miles away—the latter is good in September and October.

ASHCROFT has some fine farms and cattle ranches close by. A stage goes from here to Cariboo (famous for the gold excitement in the "sixties"), and where large hydraulic mines are being developed.

In the Cariboo District there is much land for future agricultural use, meantime splendid moose, caribou and bear provide for excellent hunting, combined with duck and geese shooting and trout fishing.

LYTTON, around which are some excellent fruit farms. The stage to Lillooet, a distance of 45 miles, affords a very pleasant and interesting drive amidst beautiful scenery.

LILLOOET is an old mining town in the "Dry Belt," now famous as a sporting centre. Big-horn sheep, mule deer and goat, also grizzly bear, are very plentiful, and some distance away caribou can be obtained. Good fishing is obtainable almost everywhere around.

Apart from the sportsman's point of view, it is a lovely country with a climate unsurpassed, having great possibilities for fruit-growing and "Dry Farming." For those who wish to spend a few weeks in the mountains without too strenuous travelling, it is especially suitable,



DAIRY FARM at CHILLIWACK in the FRASER VALLEY.



Some of the mountains rise to 11,000 feet, and, while not so rugged and grand as the Rockies, are very beautiful. In many places horses can be ridden almost to the summits.

After leaving Lytton the Cascade Range is entered, and a good idea of its scenery formed from the Observation Car as the train passes along the Fraser River.

During the salmon fishing season about August, the exciting sight of Indians scoop-netting fish from stagings of poles projected over the torrent in the canyon may be viewed, and also the salmon hung up to dry under poles arranged near the rivers.

YALE.—Along the river side near Yale the Chinamen may be seen washing out the gold from the river bars, in the old way.

AGASSIZ is the station for Harrison Hot Springs and the Dominion Government's Experimental Farm.

VANCOUVER is the most progressive city and largest port in British Columbia. Stanley Park with its enormous trees should not be missed. The salmon canneries at Steveston, which are busy in July and August, can be reached in three-quarters of an hour by electric tram. The saw-mills are also interesting to visitors.

Fine farming country extends down the Fraser Valley beyond New Westminster, which is well worth a visit.

Many pleasant excursions can be made up the Inlets in the vicinity, when the logging camps can be visited, and good fishing, boating, etc., enjoyed.

Those who arrive in Vancouver in July and August and are fond of salmon fishing should not miss a trip to Campbell River, where there is a fair hotel. There are boats leaving for that point once or twice a week, starting from Vancouver in the evening and arriving in the early morning. Small salmon running from 5 to 12 lbs. are caught by the hundreds in July and August,—the big salmon, weighing from 30 to 70 lbs., come earlier.

For those arriving in September and October, Vancouver is the out-fitting point for deer, bear and goat hunting; splendid snipe shooting can be had within an hour of town, and also geese, duck and pheasants.

VICTORIA.—Magnificent steamers run between Vancouver and Victoria and nobody should miss this trip. Victoria has many attractions; it is the seat of the Government, and as the surrounding country is very beautiful, many delightful excursions can be made. It is a good out-fitting point for parties going up the West Coast of Vancouver Island after elk, bear and other big game, which are fairly easy to get.

Victoria, the Capital City of the Province, is most charmingly situated on the south-eastern point of Vancouver Island, which is reached by a delightful sail on the palatial Canadian Pacific steamers through the Straits of Georgia and beautiful islands passed en route.

The variety of the surrounding scenes on land and sea, such as the glimpse from the corner of Fort Street, or the view from opposite the post office, with its grand vista of the snow-capped Olympian Mountains behind the Government Buildings, and Mount Baker (80 miles



RAPIDS of the KICKING HORSE RIVER.



INDIANS catching SALMON in the CANYON of the FR.



of the FRASER.

off), as seen in the distance from Shotbolt Hill, are so charming that world-wide travellers who appreciate the best of those views, delight to remember them and long to come again to benefit by Victoria's bracing climate, whilst watching the yachting, boating and other entertaining phases of Victorian life.

The well-known beauties of the "Gorge," Beacon Hill Park, "Tally-ho" sea drives, homes and gardens of Victoria, with the principal sights and buildings in the City are so well described by local guides, that we need only add a remark respecting the substantial and artistically designed group of Parliament Buildings, about which so many American visitors have asked the writer "How many million dollars did they cost?" The answer is: Less than \$900,000 (£180,000 sterling), including furniture.

The Provincial Government saw that as good value was obtained for public expenditure on those and other Government buildings, as did the businesslike Canadian Company that built the palatial "Empress" Hotel which adorns the frontage of the bay.

The bold, impressive outline of the Government Buildings shows careful grouping, with Classic and Romanesque features devoid of costly detail, but all so well proportioned that there is quiet dignity and harmony blended in all, as may be seen by the photograph on the front cover.

The interior design and decoration is eminently suitable, being neat, simple and pure in style, giving a clear impression of the Province's permanent stability and prosperity.

These Buildings stand firmly evidencing the solidity of the British Empire's progress, and the determination of the citizens of British Columbia to uphold justice and good government, by maintaining the highest welfare of the people in this Province as the greatest object of all political effort.

UNTOLD WEALTH IN THE MOUNTAINS:

The hurrying traveller who comfortably passes by train through the Rocky Mountains, or other ranges of British Columbia, casually glancing at the scenery to the peaks along the sky-line, gathers but a feeble conception of what those mountains contain in potential wealth for our people and Empire. He probably knows that the timber will provide fuel for all generations and the vegetation supports vast numbers of animals and birds he thinks of as Game, but if he wisely learns to value the reality by travelling up any of the great and fertile valleys branching north and south of the railway, or will go further into this Province in any direction, he will find enthusiastic "prospectors" and miners thriving on the mere surface of the minerals that go deep down into the mountains and more level land areas which abound further north, as may be seen by reference to the Relief Map and Map No. 6.

GREAT DIVERSITY OF COUNTRY:

A glance at the Relief Map on Exhibit I reveals, by the different shades of tint, that about 57 per cent. of the country consists of fertile valleys, plains and plateaux of similar elevations to the farming and grazing lands of sunny Alberta.



As we passed down the Fraser River, we saw, from the train, the Indians catching salmon in the great canyon above Yale.

Further, reference to the green-shaded Climatic Zones on Map No. 6, discloses how admirably situated to produce a healthy and invigorating climate, are the more mountainous parts (covering about 43 per cent. of the Province), which, by being valleyed northwards, nearly always admit sunshine to warm the soil on both sides of the valleys there found in suitable variety for all reasonable requirements.

GREATER DIVERSITY OF RESOURCES:

The variety and potential value of British Columbia's resources can hardly be equalled by those combined in any two other Provinces or States in America.

MINERALS:

The vast mineral wealth in coal, iron, lead, copper, silver and gold, building and road stone, granite, marble, limestone, etc., is only beginning to be realised by Canadians and others, as may be judged by referring to the Geological Map shown on Exhibit 5, or the Annual Reports of the Minister of Mines. They show that already more than \$300,000,000 worth of minerals have been gained, and that the present production is about \$30,000,000 per year though 250,000 square miles of unexplored mineral-bearing land remains open for prospecting and systematic development.

The fact that about 12,000 men annually pay \$60,000 through their \$5 Free Miner's Certificates, speaks volumes for their faith as practical men in the future prosperity of mining in British Columbia, where they enjoy the life of freedom.

The Mineral Laws are more liberal and fees lower than in any other part of the British Empire.

VAST MINERAL WEALTH OF THE PROVINCE:

If the traveller branches south, say from Revelstoke—or more comfortably returns that way—and thence journeys down those beautiful and economical highways of commerce by which Nature has so wonderfully blessed British Columbia in its super-abundant lakes and rivers, (as instanced in the Arrow and Kootenay Lakes and Columbia River he can traverse on his way back through the "Crow's Nest Route"), he will find such abundant mineral wealth there developing as will carry conviction to any mind, of the fact that no other Province, State, or Country, possesses such potential wealth as does this "Golden Province of British Columbia," which deservedly has its ground area printed in yellow on Map 6.

SIDE-TRIP THROUGH MINING PLACES SOUTH OF REVELSTOKE:

The branch railway runs to Arrowhead (28 miles), where it connects with the Arrow Lake steamers, by which we travel more than 100 miles, and after passing down part of the majestic Columbia River, later can travel about 100 miles down the Kootenay Lakes. These boats are large, well equipped with every comfort. A trip down the lakes is well worth making, to enable us to see the prosperous fruit farms along the shores and the beauty of the surrounding country.

All the steamers stop at Robson, where the railway is met. The following prosperous mining towns are thence reached: Trail, where the largest smelter for copper and lead ore had an output of more than \$5,000,000 during the last twelve months. Rossland, a gold and copper camp (Le Roi, War Eagle, Centre Star, Mines).



THE SALMON FISHING FLEET on the LOWER FRASER.
(Fifteen Miles from New Westminster B. C.)

Grand Forks with the Granby Smelter (one of the best equipped on the Continent). Phoenix has extensive low-grade copper mines. Greenwood is the centre for higher-grade gold, silver and copper mines.

An inspection of the mining claims recorded in any of the Provincial Government Offices will prove the reality of good mining prospects.

The charming City of Nelson is also reached from Robson. It has a small smelter on the outskirts of the town, some excellent fruit farms in the vicinity, and is one of the best all round fishing centres for the far-famed Kootenay Lake trout, etc.

Between Nelson and Robson is the magnificent Bonnington Falls—a valuable source of water power—from which electric energy is derived for the large smelter at Trail, Rossland Mines and cities around.

GREAT VALUE OF THE SPLENDIDLY DISTRIBUTED LAKES AND RIVERS:

That trip down the Lakes and Columbia River is one with others, such as that through the Okanagan, Shuswap, Kamloops, etc., lakes, which, by the Fraser River and sheltered coast inlets, link up with the Skeena, Naas, Stikine, etc., Rivers, that extend into the interior of the Province as natural highways of commerce. These connect with extensive chains of long narrow lakes, thus forming a wide-spread network of hydraulic power, which is rapidly developing into an important asset, helping to draw new industries to these Pacific shores, where the economical facilities for production provided by hydro-electric power are attracting world-wide attention.

WATER AND ELECTRIC POWER:

The adjoining pictures show some of the vast number of waterfalls of British Columbia—nearly all of which, though now running to waste, will, in the near future, be harnessed to produce cheap and effective light and power, to drive industrial machinery and factories distributed to the best advantage, where the workers can live brighter and healthier lives in this bracing climate, than in either Eastern America or Europe.

A COUNTRY'S POWER TO DEVELOP AND MAINTAIN ITS RESOURCES DEPENDS UPON CLIMATIC CONDITIONS:

The power of a country to maintain a great people and develop its resources depends primarily upon its climate. That is true even of its mineral wealth, as the coal strata north of Alaska are as valueless as coal measures under the centre of the Sahara Desert would be. Whilst gold, etc., may be won under hard conditions in Southern Alaska, the more permanent activities of national life dependent upon agriculture and extensive manufactures, can only thrive where climatic conditions are favourable.

ALL LIFE DEPENDS UPON CLIMATE:

The growth of agricultural produce, timber, grass, etc. sustaining animal and bird life, the abundance and quality of the fish, etc., are so contingent upon climate, that all life, whether vegetable, animal or human, has to conform to, or move with the climate, as the forsaken cities now in the Central Asian Desert of Gobi, and those of the Arizona rock dwellers in the now arid regions of the United States prove. How they were climatically stranded there may be explained later.



THE UPPER FALLS IN KOOTENAY RIVER. "We caught many a fine trout between the upper and lower falls."
An example of the many large SOURCES of HYDRO-ELECTRIC POWER awaiting development for commercial use.

DIRECT ACCESS TO THE SEA ENHANCES NATURAL POWER:

All interior Countries and Provinces need to convey their produce to the sea, as the great highway of commerce, along which so much of it requires to be economically carried to the markets of the World, in order to obtain in return their products or money value.

The bracing sea-air invigorates the maritime peoples and the seafaring life encourages the spirit of enterprise and progress, as instanced in the similar climatic and maritime conditions prevailing in Great Britain and British Columbia, which, within the same northern latitudes, are fertilised by the warm, moist west winds of the Atlantic and Pacific Oceans, respectively.

THE VARIETY OF CLIMATES ENJOYED IN B. C.:

British Columbia is so fortunately favoured that any desirable climate—from the semi-tropical to the northern limit of the Cold Temperate Zone—may be extensively found to suit all reasonable requirements.

In order that we may recognise the right importance of that variety, and understand how that unique advantage is developed in British Columbia, it is worth while referring to the profile section of the Canadian Pacific Railway from Winnipeg to Vancouver, together with the additions we have made thereto, by inserting the "Bute Inlet to Notch Hill" section, due west across from Notch Hill to the sea at Bute Inlet, as shown on the long Profile Exhibit.

It is also necessary to bear in mind: First, that the prevailing winds and weather come from the warm Pacific Ocean as westerly winds; and, Secondly, that the mountain ranges traversed by the Canadian Pacific

Railway section are about twice the height of the railway line above sea level, as the Railway Company pierced through the valleys along the lowest grades for economic transit, and did not show profiles of the Coast Range and Cascade Mountains they avoided.

SEMI-TROPICAL VEGETATION:

Fairly dense semi-tropical vegetation prevails in the numerous valleys and small prairie expanses, near the Boundary, adjoining the United States and along the railway west of the "Dry Belt." The latter can be seen from the train, but the far more fertile Districts of the Lower Fraser and Boundary Valleys abounding in fruit, should be visited to be appreciated, and studied by using the "Fruit Map."

CLEARER SKIES AND DRYER ATMOSPHERE INCREASE THE HOURS OF ACTUAL SUNSHINE IN THE NORTH-WEST:

The North-west arm of the "Summer 60 deg. Isotherm" on the "Climatic Sketch Map" extending into Alaska, emphasises the fact of the clearer skies admitting greater sunshine over territories traversed by the Pacific contact with the Coast and Cascade Ranges.

winds, which have been deprived of their moisture by

WHEAT CAN BE SOWN AND REAPED IN ABOUT 90 DAYS:

That great factor operating in unison with the important climatic force exerted by the warm winds from the Japan Current being directed through the northern half of British Columbia in summer, accounts for the extraordinarily rapid growth of wheat, etc., in the Peace River Country through the Cariboo and Athabasca Districts, where Spring Wheat can be sown and



A BRITISH COLUMBIA ORCHARD IN BLOOM.



REAPED within about 90 days. Consequently it is practicable for enterprising people to go for the ideal summer weather, there to raise their crops and come out with their reward to spend the winter with their friends where they choose.

INCREASING FRUIT-BEARING POWERS OF THE NORTH-WEST:

The very remarkable increase in the productive powers of the wild-berry shrubs, etc., as the investigator advances from Manitoba through the North-West, is undeniably established by the Official Reports of Professor Macoun, who has, during so many years, been employed as Chief Botanist by the Canadian Government, and has most extensively investigated the growth of vegetation during recent years through the North-Western Provinces.

He and other explorers have been greatly impressed with the fact that the same kinds of berries increase in the abundance of their crops as they range northwards. Where berries have to be picked singly near the United States Boundary, they can be gathered more in handfuls north of the Peace River.

Further, he demonstrates that the same berries fruit earlier upon the hill sides facing the south than they do on the same slopes lower down, thus proving the advantages of increased sunshine for fruit development.

GREATER HOURS OF SUNSHINE FURTHER NORTH:

The hours of Sunshine recorded on Map 6 demonstrate how the warming benefits of the Summer sunshine compensates northern lands for their longer Winters.

RANGE OF BRITISH COLUMBIAN FRUIT LANDS:

The superior merits of British Columbia's Fruit are so well known that it is only necessary to refer readers who have not read the Government's pamphlet on "Fruit Growing in British Columbia," to that document, and record the following notes upon the distribution of the famous Fruit-Growing Lands of this Province as demonstrated on the impartial map prepared by Mr. Maxwell Smith of the Dominion's Agricultural Department, showing the Fruit-Growing Districts of British Columbia:—

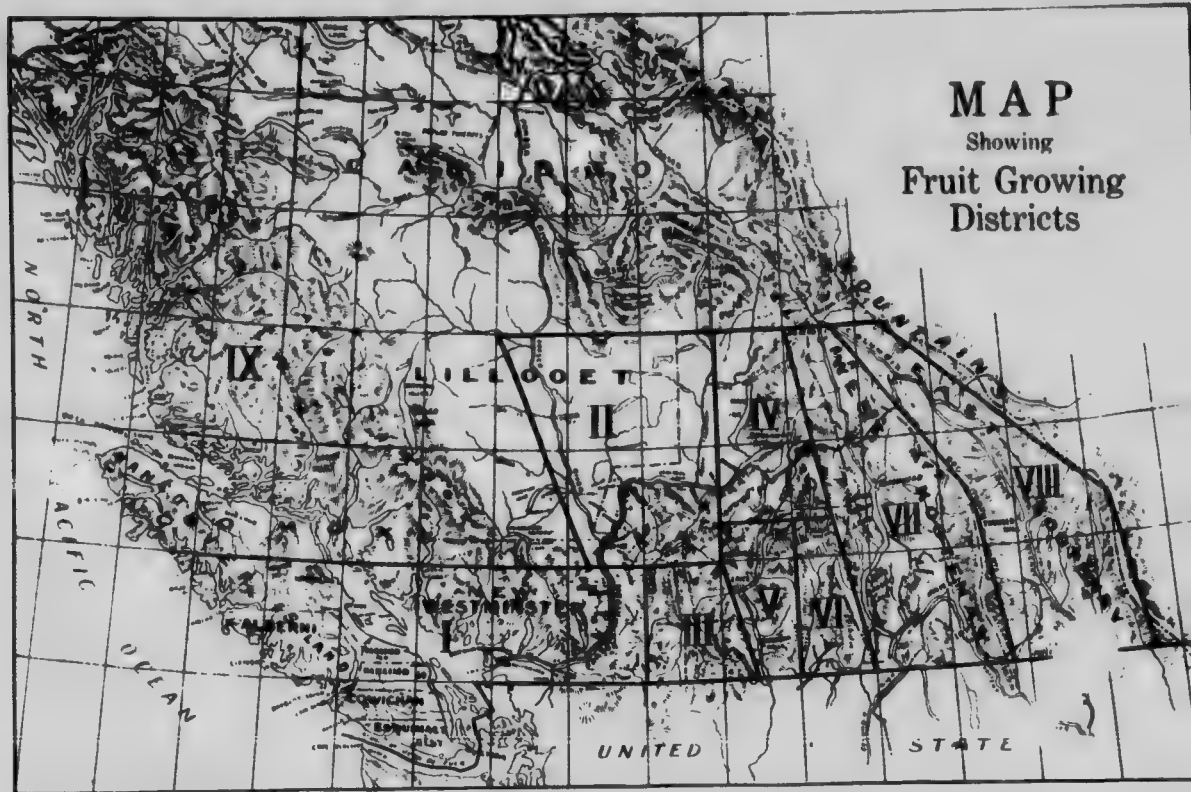
The Fruit-Growing Lands of British Columbia are of large extent, and include all the fertile valleys from the Rocky Mountains to the Pacific Coast, and from the International Boundary north to Cariboo.

Apples, pears, cherries, plums and small fruits grow over all that area.

Peaches, grapes, nectarines, and other delicate fruits, grow to perfection in the open valleys in the southern districts.

The principal districts in which fruit is grown on a large scale are: Vancouver Island and adjacent islands, New Westminster, Okanagan, Lillooet, Yale and Kootenay.

Some of the favourite sections of these districts, in which fruit-growing is established on a commercial basis, are: Fraser River Valley, Kamloops, Lytton, Ashcroft, Spence's Bridge, Enderby, Armstrong, Similkameen, Penticton, Nelson, Kelowna and Vernon.



SUPERIOR QUALITY OF BRITISH COLUMBIAN FRUIT:

The qualities of apples, etc., improve, like the hardier qualities of the people and the berries as we progress northwards from the United States, where the warmer and drier climate produces harder and less choice flavoured fruit.

The more northerly grown fruit, though more abundant, is not so large in size. That more hardy fruit of handier size is proving a decided advantage to the middle section of British Columbia as it is being more appreciated in the Australian and Oriental markets.

No. 1 District on the Map embraces the South of Vancouver Island and the Mainland around Vancouver, where the growing of small fruits such as strawberries, etc., has proved most profitable.

Excellent varieties of apples, pears, plums, prunes and cherries grow to perfection in this district, besides many different varieties of nuts, and, in especially favoured spots, peaches, grapes, nectarines, apricots and other tender fruits.

Careful drainage and culture is necessary owing to the abundant moisture of this area, outside the Victoria District.

No. 2 District being within the "Dry Belt" (see Map No. 6) requires profitable outlay to irrigate its fertile lands. Happily the abundance of river and stream water so far compensates for the lack of rain that the highest qualities of fruits named in No. 1 District can be raised in abundance.

No. 3 District is also within the "Dry Belt," at lower elevations than No. 2, and therefore enjoys a semi-tropical climate. Owing to its abundant sunshine it is most favourable for the open growth of grapes, peaches, and other delicate fruits.

No. 4 includes the District denoted by the cross-hatched oval area shown on Map No. 6, around Shuswap Lake, etc., where the rainfall is sufficient to grow splendid apples, pears, plums, cherries, etc.

No. 5 extends south down the great Okanagan Valley to the International Boundary, where, by the application of irrigation, immense quantities of peaches, prunes, hops, apples, pears and general fruits are profitably grown.

No. 6 is also within the "Dry Belt," where the above-named fruits can be grown on the excellent though limited area of land available for irrigation.

No. 7, the West Kootenay District, has a larger rainfall, so that irrigation is only necessary in the very dry years. It is rapidly developing into a great fruit-growing centre.

No. 8, on the eastern side of the Selkirk Range, includes the fertile and extensive valleys of the Kootenay River, etc., where large quantities and most varieties of fruits named can be grown.

No. 9 comprises the great Coast area, including Queen Charlotte and other Islands, also the northern-third of Vancouver Island, where the rainfall is excessive and therefore more suited to vegetable than fruit-growing; though apples and even peaches and grapes have been successfully grown as far north as Hazelton, on the Skeena, 60 miles north of Prince Rupert's latitude.



MAMMALS in PROVINCIAL MUSEUM, VICTORIA, B. C.

AGRICULTURE:

The numerous valleys of varied width and extensive plateaux spread over 10,000,000 acres northwards are well suited for agriculture and grazing.

Nearly all the best farm lands in the Fraser Valley and south of the Canadian Pacific Railway have been taken up already.

Mixed Farming and vegetable growing prove profitable in every district, as mining, logging and other camps abound, and cities following Vancouver are rapidly creating an expanding market for all kinds of agricultural produce.

Poultry Raising is highly profitable, there being a good and increasing market for poultry and eggs at remunerative cash prices, as the recent establishment of the Pioneer Poultry Ranch near Kamloops, with a capacity to raise 100,000 poultry per year, indicates.

Dairying is rapidly developing, as splendid pastures are available, and high prices for milk, butter, cream and cheese prevail.

Cattle Ranching is profitably advancing more to the front along the extensive prairie and grazing lands now being opened up by the Grand Trunk Pacific Railway.

Sheep Raising is spreading up the country around Lillooet and further north towards the fertile "Peace River Country."

Typical Agricultural illustrations are grouped together near the last pages for greater convenience.

Fruit Culture has so rapidly risen to front rank in the branches of agriculture, that its wide-spread cultivation is given in fuller detail.

GAME:

This is one of the Minor developing resources of the Province and so linked up with the scenery, that it has been deemed best to note the points of interest to sportsmen as we refer to the scenes whilst travelling.

The wonderful variety of Game of all kinds spread over British Columbia has raised it to the premier position amongst sport-raising countries, as the paradise of sportsmen. No other Province, State, or Country, possesses such an abundance of large, small and winged Game, as it teems with life, like one vast hunting ground, spreading over 300,000 square miles.

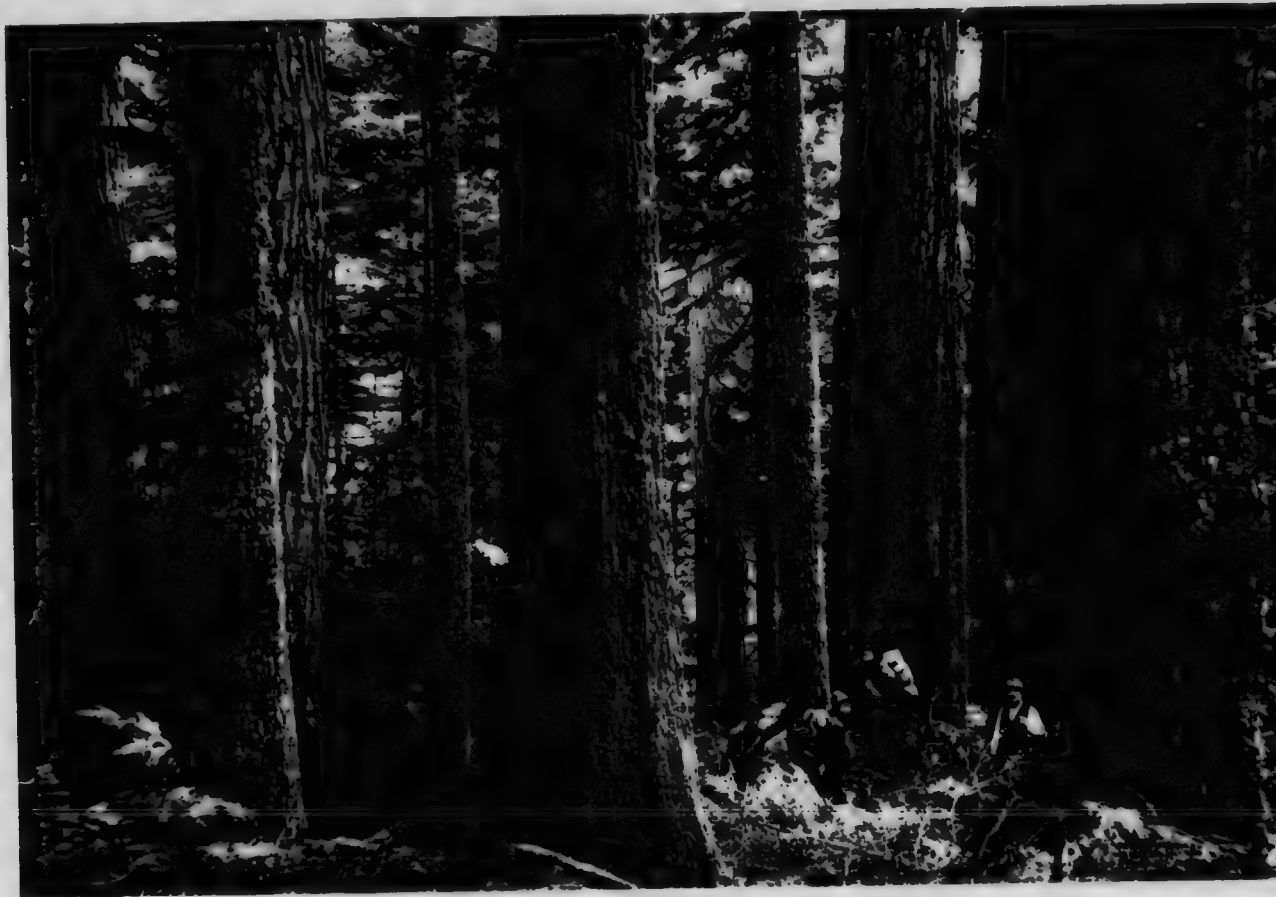
Big Game.—Black and grizzly bears, panthers, wolves, lynx, mountain sheep and goat, moose, elk, caribou and other species of deer, etc., are numerous.

Small Game, such as otter, beaver, mink, marten, raccoon, badger, porcupine, fox, hare, rabbit, marmot, etc., abound and are widely distributed.

Winged Game.—Ducks and geese, grouse, ptarmigan and quail abound, whilst pheasants, capercailzie, black game, and partridges have been introduced and are increasing rapidly.

Vast numbers of sea-birds, fishing-ducks, etc., are available on the Coast floods, rivers and lakes.

Fish.—Spring salmon, coho, halibut, and other sea fish teem around the Coast, whilst salmon and trout of many fine varieties, char and other fine lake, river and stream fish are prolific throughout the Mainland, which is intersected by the most wonderful system of river and lake communication so eminently adapted to the production of sporting fish. That accounts for the world-fame of British Columbia's Fisheries.



THE FOREST WEALTH OF BRITISH COLUMBIA.

THE TIMBER WEALTH OF BRITISH COLUMBIA.

The timber wealth of British Columbia is a growing asset of which any nation might well be proud. Its abundance along the Coast and upon the extensive Island areas, also along the great railway routes, by means of which it can be most economically transported to the ever extending markets of the World for this essential commodity, is yearly advancing its intrinsic value.

The fact that the timber resources of other nations are becoming insufficient for their increasing requirements, is yearly enhancing the standard of British Columbia's premier position as possessor of the richest and most accessible timber territory in the World.

AREA:

The total forest area of British Columbia is estimated by the most competent authority at about 182,750,000 acres. Although only a portion of the timber upon this vast area has grown to its full size for commercial value, the remainder is covered by vast forests of smaller trees, which, whilst not yet fully developed as marketable timber, annually grow more rapidly than in other countries, because the abundant moisture and genial climate of British Columbia raises more vigorous trees with abundance of sap, from the virgin soil developed through ages of unmolested forest growth.

Dense growths of timber clothe the slopes of the Coast covering most of the undulating lands and mountains from the southern boundary to Alaska.

DISTRIBUTION:

The distribution of the best large timber, licensed or leased before January 1st, 1909, is indicated upon Map No. 6 by the green symbols, as registered below the scale of miles in the order of their importance.

DOUGLAS FIR:

The Douglas fir is the most widely distributed and of the highest value. It grows across the Province from the United States Boundary as far north as Queen Charlotte Sound, north of Vancouver Island, beyond which it is supplanted by the cedar, yellow cedar, hemlock and spruce.

The fir on the Coast attains immense proportions, sometimes growing to a height of 300 feet, with a base circumference of 30 to 50 feet. The best average trees have clean stems up to 150 feet, above which the branches range another 150 feet to the top.

Readers can most easily comprehend the immense size of the larger trees by considering the 147-ft. height of the flagstaff in front of the Parliament Buildings (shown on the cover), as 150 feet, and bearing in mind that the top of the figure of the Explorer Vancouver on the Dome is 150 ft. high; these combined, total 300 feet.

The diameter of the flagstaff at ground level being 15 inches, would require about 60 such poles, 150 feet long, lashed round it to equal the lower half of a tree of 30 feet circumference, on the top of which 30 like poles



LOADING LUMBER (Timber) in VANCOUVER HARBOUR.



each 150 feet long, would need to be tied together to equal the upper half, if rightly placed over the flagstaff's top, or above the height of Vancouver's figure. Hence, about 90 to 100 of such 150-ft. flagstaffs would about equal the quantity of timber which one of the many giant fir trees of British Columbia is producing.

The fir is best developed on Vancouver Island, the Coast slopes, and on the Selkirk and Gold Mountain Ranges, where it is the staple of commerce, being prized for its durability and strength.

The cedar ranks next in importance as most suitable for shingles. British Columbia red cedar shingles rank highest as the standard, and find an ever increasing market in Eastern Canada and the United States, being exported as far as New York and Boston, where they command a higher price than any other shingle.

Spruce is much sought after for the better class of buildings and the higher grades of boxes.

Hemlock is abundant and fast attaining to the position that its quality is establishing. The British Columbian species is different from and far superior to the East Canadian Hemlock, and is used for many purposes instead of fir and spruce.

There are many other kinds of trees of commercial value which are increasingly being manufactured into lumber. These include larch or balsam, maple, white-pine, tamarac, yew, cottonwood, etc.

There are already more than two hundred saw-mills and many shingle mills, sash and door factories operating, together with extensive logging plants.

FOREST WEALTH:

The forests of British Columbia are already producing, commercially, more than \$13,000,000 annually. This will be largely increased during the next few years, now that more extensive lumber and pulp mills are being established on the Coast.

WOOD PULP, PAPER, ETC., INDUSTRIES:

The production of paper, pulp boards, card boards, etc., in British Columbia is sure to become one of the most useful and profitable industries in the World. Already two of the largest pulp-mills are being built on the Coast, because here, in dense forests, are most abundantly found the necessary quick-growing supplies of timber, near which we find the cheapest water power, admirably distributed to economically drive the machinery; whilst the numerous rivers, streams, and naturally deep and sheltered harbours in the "fiords" of the Pacific Ocean along the Coast, provide for easy and cheap transportation of that produce in ship-loads direct to all the ports of every nation.

These economic advantages are so superior to those obtainable in other countries that they will further lead to development of manufactories for finished wood building material, furniture, etc., of greater extent than any other country can produce.

Thus British Columbia's geographical position gives her decided advantages, which are supremely established by the mildness of the Coast climate, which permits of work being done comfortably all the year round.



The LIVELY SALMON thrashing the water INSIDE the TRAP.

THE FISHERY WEALTH OF BRITISH COLUMBIA.



SALMON TRAP near VICTORIA.

The Fisheries of British Columbia are the most prolific of the best quality of fish in the World. They are the more valuable because of their remarkable accessibility, and the rapidly developing facilities now being provided by three transcontinental railways and several steamship lines for distributing these and other desired products to the markets of America, Asia and Europe.

The full significance of the wonderful coast line of British Columbia, with its enormous production of fish,

is only just dawning upon the minds of the races of mankind. Few, even of British Columbians, have yet become impressed with a tithe of the immense possibilities awaiting the rapid development of the fishing industries.

SALMON:

We learn of 60,000 to 100,000, or even more, salmon being caught in one of the many trap-nets dotted along the Coast, but we are only just beginning to recognise the marvellous potentialities of these unvalled coast waters which are destined to furnish perennial wealth to this most bountifully furnished Province.

The fact that about 1,200,000 cases, containing about 16,000,000 salmon, are being packed in British Columbia this year indicates the magnitude to which this branch of the fishing industry has attained.

There is something more easily realisable in the scenes we are able to recall to mind after having seen the tens of thousands of salmon lashing the waters while they are being gathered closer together by the fishermen gathering up the net-trap as shown on the plate, and the subsequent dropping of the "spiller-net," with its strengthening rope-strips weighted down, through the seething mass of salmon, until about 1,000 float over it. Then the steam-winch suddenly jerks up the "spiller" and tipples the fish into the great wooden "scow's" compartments, as shown opposite, loading fish for conveyance to the "cannery," where they are cut up, cleansed, tinned and cooked, as illustrated on the next page.



Raising the Spiller filled with Salmon, and loading the Scow.

One very remarkable feature of the British Columbian salmon fishery, is the fact that every fourth year the rush of salmon is about twice as numerous as in the intervening three years. This 1909 year is one of the double catch years. The unknown reason for this marked fluctuation is being sought for by the able Deputy Commissioner of Fisheries.

WHALES:

The whaling industry around Vancouver Island is highly profitable and extensive. The captures during the first half of this year indicate that about 750 whales, averaging about 75 tons each—56,250 tons, are being caught this season at three whaling stations off the shores of Vancouver Island alone. These produce large quantities of oil and fertilising material, which may be increased by hunting further north around Queen Charlotte Islands.

The method of hunting by harpoons shot from the bow of the steamer is shown by the picture on the next plate. Travellers in coasting steamers sometimes see (as the writer did) the exciting scene of a whale's terrific struggles to free itself from the harpooned line that tethers it to the whaling steamer which the struggling whale drags and tilts about desperately. The whaling steamer was later seen coming in, towing two of these monsters, each about 90 feet long, of the variety locally known as "sulphur-bottoms."

The following excerpt from the "Victoria Colonist," dated 17th August, 1909, records 444 whales caught during the last 7 1-2 months:

The rival whaling stations at Sechart and Kyuquot on the west coast of Vancouver Island are still about even in their score of the number of whales taken this season, according to news brought by the steamer "Tees," which returned to port yesterday from Quatsino and way ports—the Sechart station had 225 whales to date, and the Kyuquot station 219.

Unfortunately there is as yet no close season established for the protection of the whaling industry, which should be safeguarded in the permanent interests of the Province.

SEALS:

The sealing industry centered in Victoria was formerly very extensive, as may be gathered from the fleet of sealing vessels in the harbour, illustrated by the upper picture on the next page.

This trade has unfortunately decreased, having sadly suffered through the unfair advantages given to the Japanese who fish close in to the breeding grounds, whilst Canadians are compelled to remain far out at great disadvantage.

HERRING:

Over 20,000 tons of herrings are annually shipped from Nanaimo, one of Vancouver Island's ports, but those millions of herrings are relatively units when compared with the myriads breeding prolifically in the fertile waters of the Pacific Ocean.

HALIBUT:

The halibut fishing is attracting much attention. It is most extensively carried on in Hecate Straits by means of baited lines suspended 6 feet apart along connecting lines, buoyed by boats working from a steamer. About 12,500 tons were caught last year.



Sealing Point, Victoria Harbor, B.C.

The UNBOUNDED WEALTH of BRITISH COLUMBIA'S FISHERIES.

OTHER FISH:

Many other kinds of fish, such as cod-fish, oolachan (a kind of smelt), flounder, etc., can be marketed to great advantage.

SHELL FISH:

Such profusion of shell-fish multiply along this marvellous Coast that few people pay any attention to them. Branches of dead trees become laden with mussels, etc., till they are weighted down to the bottom. The oyster and other industries are being developed by means of the Marine Hatchery and Biological Station, established by the Dominion Government near Nanaimo.

Such minor branches of the fishing industry as the canning of crabs, lobsters, prawns, shrimps, etc., could be made to pay handsomely and give employment to many people, whilst the oyster beds are increasing.

GAME FISHES FOR SPORTSMEN:

No other part of the world offers such exceptionally good sport to the amateur fisherman and angler. All the numerous rivers, creeks and lakes, as also the sea, teem with countless salmon and other sporting fish, and are available at all seasons and in every part of the Province, where perfect freedom can be enjoyed amidst such beautiful scenes as those typically pictured on the illustrations herein and the well-chosen pictures in "The Game Fishes of British Columbia," issued by the Provincial Bureau of Information at Victoria.

"INSIDE PASSAGE" CRUISE UP THE COAST OF BRITISH COLUMBIA TO ALASKA.

THE GRANDEST, EASIEST AND BEST TRIP KNOWN:

Unless the reader sails up the 1,000 miles of the peaceful channel from Victoria to Skagway, he cannot obtain an adequate realisation of the extent and beauties of British Columbia.

The tour up the Coast of British Columbia has charms and ever present attractions beyond what any other journey or holiday route can furnish.

The round trip from Victoria and Vancouver to Skagway and back, most restfully speeds us through nearly 2,000 miles of the sublimest variety of scenery known on tourist routes, and happily it can be varied to any required extent, e.g., a side trip up the Bute Inlet shows mountains rising 8,000 feet, within one mile from the shore.

SCENERY:

The invigorating atmosphere, majestic scenery of the unrivalled coast-line, snow-capped and glacier breasted mountains, forest-clad hills, verdant valleys with quaint sea-side Indian and White settlers' villages, logging camps, canneries, fishing stations, totem poles, etc., along the shores of this most sheltered and glorious of sea-routes, have established the world-renowned reputation of this most enjoyable and economical tour, which is yearly attracting rapidly increasing numbers of appreciative visitors to the comfortable steamers sailing along the beautiful, calm, salt water that teems with fish and bird life.



THE PACIFIC COAST INDIANS hold a "POTLATCH" to IMPRESS the VIRTUE of UNSELFISHNESS.

The sight of well-fed water-fowl scooting along the placid water out of the way of the steamer, around which the frisky porpoises swim, race and dive, are amongst the many varied incidents which enhance the satisfaction of visitors, whose daily interest and mutually pleasurable conversation naturally develop along with their enjoyment throughout the trip.

The handy pamphlets and folders, readily mailed by the Canadian Railway and Shipping Companies, from which part of this information is taken, furnish fuller details of this delightful trip than our space admits.

The following brief description of the chief points of interest en route may serve as a preliminary guide:—

FEATURES:

The first feature attracting the visitor's attention is the beautifully calm sea-water, so lake-like and still that the ever-green trees of the forest-clad hills and verdant shore are reflected in perfect picture forms, which can hardly fail to permanently impress their outlines upon the minds of thoughtful observers, who through those reflections, in suitable localities, can see deep down in the clear water, numerous specimens of the Pacific fish disporting themselves, and further admire the beauties of star and shell-fish, sea anemonies and vegetable life displayed in the shallow waters along the shore.

A most agreeable surprise results from the realisation of being at sea without any risk of rolling waves, or any of the discomforts feared by those who have crossed the Atlantic.

Along this route, inside the Islands, the Pacific Ocean is always peacefully settled down to maintain its

pacific reputation; whilst it ever refreshes the British Columbian coastline with those gentle bracing breezes which bring the ozone of the purifying sea, to brace up energies and infuse fresh life into our bodies and minds, that along these shores become most rapidly invigorated by the bracing air and refreshing scenes.

COMFORTABLE TRAVEL:

From the time that our baggage is placed in the airy state rooms of the "Princess," or other lines of Pacific coasting steamers, where every reasonable convenience is amply provided for in the spacious "observation" and other rooms, social halls, etc., we can rest in comfort to view the scenery and enjoy the companionship of friends we meet on board, assured of safety and all the attention as to food and service, equal to those obtainable in good hotels ashore.

Scenes throughout the voyage are constantly changing as the ship steams forward—for land is continually in sight, and during most of the journey is almost as close to view as the scene pictured on the following page, which was taken from the stern of the ship steaming through Greenville Channel, nearing Prince Rupert, about midway on the upward trip.

VANCOUVER ISLAND:

Leaving the Province's greatest and most prosperous commercial City of Vancouver, with its ideal natural harbour, as typical of many smaller natural harbours we shall pass, we notice the mountains of the Coast Range skirted by green trees, etc., down to the shore, whilst through the distant purple haze on the left we may see



BRITISH COLUMBIA INDIANS, CANOE RACING—The FINEST SPORT in the WORLD.

the upper outline of part of Vancouver Island, along the eastern side of which we shall glide serenely through about 300 miles of this ever-changing sea-scape, and thus realise the magnitude of this Island as being about two-thirds the size of England, or larger than Switzerland, which it much resembles, though it has greater charms in its sea-girt coast and vast natural wealth in timber, coal, iron, copper, etc., deposits.

Across the left of the ship's bow we may obtain a glimpse of the interesting Biological Station the Canadian Government are using to investigate and develop the fishery life of the Pacific Coast at Departure Bay, near Nanaimo, which is well worth a side-trip on our return. From there we can go by rail along Vancouver Island to Victoria and the Naval Station at Esquimalt.

NANAIMO:

The Island's rising coal port of Nanaimo and great centre of the Herring fishery may be seen to the left rear, after passing Gabriola Island. About seven hours later the romantic scenery through Seymour Narrows call forth our admiration as the officers of the ship skilfully navigate through those picturesque Narrows—one of the swiftest and prettiest passages for which this Coast is noted.

ALERT BAY:

Ten hours later the first stop is made at Alert Bay, an Indian village of unique interest with its long range of Totem poles, cedar huts, war and fishing canoes. Here is a flourishing salmon cannery and Mission Settlement.

QUEEN CHARLOTTE SOUND:

After leaving Alert Bay the steamer winds in and out among numerous islands and narrow passages, whence logging camps may be seen, till it glides into Queen Charlotte Sound, which is the only portion of the thousand mile up-coast trip that is fully open to the mighty Pacific. This, during about two hours, is one of the many delightful changes in the panoramic trip to Alaska. In the waters outside Queen Charlotte Sound are the world-famous halibut banks to and from which fishing fleets are constantly coming and going.

Beyond the Sound, the steamer pushes in among islands and proceeds to further delight the eyes of the traveller. The channels are deep, the waters dark and wonderfully green, and if seen at night have a strange phosphorescent gleam which is fascinatingly weird. One may revel in an ever-changing panorama of vivid vegetation or softly green slopes, bold crags and rocky peaks, with picturesque vistas of sea and mountains. Glaciers twinkled by the sun, and rushing mountain streams, are seen at fairly close range, adding an unexpected beauty to the scene. The everlasting hills make sturdy sky-lines in every direction and keep their eternal vigilance, standing first to welcome each incoming day, with hoary heads held proudly aloft.

RIVERS INLET:

Past Rivers Inlet with its fleets of fishing boats, and many canneries which annually ship thousands of cases of canned salmon to distant markets, on to Namu with its canneries, and Bella Bella on Campbell Island, with its interesting mission and Indian villages. Passing



GREENVILLE CHANNEL—HALF-WAY up the COAST.

through Lama Passage the vessel proceeds along Seaford Channel into Milbank Sound, where one's vocabulary is quickly used up with trying to express gratification over the scene as it is slowly unfolded to the gaze. Dodging around this island and up varied channels, the vessel glides steadily while the passengers wonder where the next turn will be—the more timid ones frequently have grave misgivings as to whether the captain has not lost his way. But soon a smiling, dancing waterway peeps around a rugged corner and clear sailing is assured. This delightful experience is extended through Finlayson Channel, on the west shore of which is the minerally rich Princess Royal Island, where mines are being developed.

SWANSON BAY:

The thriving port of Swanson Bay next comes in sight, where the steamer's stay enables us to walk ashore. An extensive pulp mill of the latest type is the main attraction at this port. A new experience awaits the tourist as the boat enters Greenville Channel, which is one of the most marvelous stretches of water in the world. Away to the right Douglas Channel loses itself among its mountain friends and leads to famous fertile valleys with Kitimaat at their head. Just ahead of the steamer the water seems to have suddenly ended; mountains rise sheer on every side and the boat looks but a mere atom beside their mightiness. A clear turn around a wooded corner that has suddenly come into view, and the boat glides into an inland sea whose tree-clad mountains reach great heights. Greenville Channel runs deep between boldly defined mountains and leaves the traveller awestruck by these wonders of nature.

PORT ESSINGTON:

This channel is followed to the mouth of the Skeena River where Port Essington is reached. The Skeena, winding as it does through fertile lands, is a very important waterway into British Columbia, where wonderful opportunities for agricultural and mining development lie within reach of its waters. At present it is navigable for 180 miles, and powerful stern-wheelers make trips to interior points every few days into that flowery land.

The ship on leaving Port Essington glides through the peaceful, clear sea-water which teems with fish, to that rising great port, Prince Rupert, where capacious wharves, etc., enable us to land and see the wonderful hive of industrious people who are rapidly transforming the old rocky Indian Reserve into the most up-to-date and beautifully laid out great trans-continental railway terminus out-lined on Exhibit No. 1, which shows how cities are being best designed and built in British Columbia.

Prince Rupert as the great CENTRAL PORT for British Columbia is already, by its great prospects, attracting large numbers of traders, builders and investors, whose energies aided by the wise facilities given by the Government of British Columbia and the Grand Trunk Pacific Railway Company, present such an interesting exhibition of rapid and solid construction of streets, artistically laid out and lined with well-designed and substantial public buildings, shops, hotels, etc., with all the surroundings which ensure Prince Rupert's rapid development to front rank amongst the great cities of the Pacific Coast.

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HOW CITIES ARE BEING BEST DESIGNED AND BUILT IN BRITISH COLUMBIA.

PRINCE RUPERT:

Though this is the best example of wise Governmental control in planning cities in advance of building, where health and the general welfare of the inhabitants are the chief considerations, it is not the only instance, as the British Columbian Government have still more effective control of the finer site of the rising, healthful, residential city of "POINT GREY," (now being developed to the west of Vancouver City) where the Government own the whole of the land; whereas at Prince Rupert the Government only owned the dark-shaded parts, though their control is relatively greater.

These are the firm beginnings of prudent statesmanship, which enables British Columbia to direct the best designs for the development of its future cities, so that prudence may select what is best from the experiences of the well-tried civilisation of Europe, and the quicker growth of the United States, to guide this youthful Province in rightly establishing the surest basis for permanent economic prosperity, by ensuring the healthiest and most uplifting surroundings, to encourage the best energies and self-respect of its workers.

Orderly development is recognised as necessarily governed by true regard for the well-being of the whole community, who can thus mutually rise up to the fullest enjoyment of united liberty and prosperity.

The spirit of unity and mutuality is largely encouraged and advanced by the free intercourse enjoyed by

British Columbians, as the traveller may easily realise the steamboats, where there is ample room and freedom for ready conversation and comparison of ideas among the passengers, who necessarily use the steamboats travel along the Coast and up the great rivers, which form the natural highways of commerce into the great and fertile interior districts now being opened up by extensive railway developments in that more open country.

The immense increase in the production of food and wealth in the northern parts of the great Provinces of British Columbia, Alberta and Saskatchewan will cause a vast volume of traffic to pass through Prince Rupert and from Asia and Europe, as well the great American coasting and interior trades, for which great numbers of ships will trade to this port that is presently served by the Canadian Pacific Railway Company's line of "Princesses" and other coasting services.

The Grand Trunk Pacific Railway Company are purchasing a fleet of their own to run from Prince Rupert so that during the coming year we shall find still more lively developments along this Coast, when the "Princesses" begin to compete with the "Princesses" for coasting trade, and the "Empresses" for the increasing traffic and from China, Japan, India, Australia and Europe.

The energetic building of this great and beautiful port is one of the liveliest and most instructive sights in the World, as inspection of its Plan on Exhibit 1 shows.

METLAKATLA:

The next point of interest rising into view is Metlakatla, where the early missionaries christianised the fierce Tsimpsean Indians, whose man-eating feasts were carried on less than 40 years ago.

PORT SIMPSON:

Port Simpson is reached about an hour later. It was the first northern settlement established by the Hudson's Bay Company. Here the old post still used by that Company may be visited. It was formerly enclosed in a stockaded fortress while guns mounted on bastions guarded the corners. Wonderous stories are told of the stirring scenes enacted here; raids and massacres by fighting tribes of natives, barbaric practices of burying slaves alive beneath the corner post. New lodges, and many other fearful customs. The totem poles and native carvings of the Indian village are sights that are well worth seeing.

Shortly after leaving Port Simpson the steamer leaving Chatham Sound passes Cape Fox, the most south-eastern point of Alaska, as our course is directed to Ketchikan, the port of entry for Alaska, where all the requirements of the United States Government have to be fulfilled.

KETCHIKAN:

At the busy town of Ketchikan (the centre of an extensive copper mining district), we first step upon Alaskan Territory—that "Great Country," as the name Alaska means.

It is truly a great and wonderful land, destined to loom increasingly great in the minds of thoughtful people.

not only in America, but throughout the World; because its invigorating climate and natural splendour of scenery disclose such marvellous phenomena of nature as no other land can produce.

Steamers always stay half-an-hour in Ketchikan where a walk along its quaint streets presents many interesting sights. The Indian women and their families display their useful hand-made baskets, etc., on the streets, where fine specimens of their handicraft and curios may be obtained.

WRANGEL:

From Ketchikan the course through Clarence Strait leaves the large Prince of Wales Island boldly outlined on the left, and the beautiful Zarembo Island on the right, as we approach Wrangel, which suddenly comes to view on entering the broad, still waters of Frederick Sound.

GLACIERS IN SIGHT:

Here nature entertains the tourist by displaying more of her specially beautiful scenic gems in the form of mighty glaciers. It is quite possible to be favoured with a sight of a huge block of ice breaking away from the parent ice field and with a noise like mighty thunder leap over crags, and scatter boulders like marbles in its mad rush to reach the icy waters below.

Always changing, ever varying, ancient as the Glacial Period, these curious nature phenomena must be seen to be appreciated, and having once been seen remain forever focused in the mind's eye. The two principal glaciers in this district are Patterson and Baird, along Stephen's Passage, which the ship now slowly enters. While going



STEAMER conveying TOURISTS to the ICE-FRONT of the TAKU GLACIER.

through this Passage the famous Sumdum Glacier is very easily observed, as it extends down to the sea through Endicott Arm.

TAKU AND FOSTER GLACIERS:

Before emerging from the delightful scenery in Stephen's Passage we pass Taku Harbour, where busy canneries are situated. Here a splendid view of TAKU GLACIER, the pure ice gem of the glaciers in this district, may be obtained as the steamer makes a call at this glacier on the southbound trip, as illustrated opposite.

In crossing Taku Inlet the ship encounters many ice floes from the giant glacier, and one feels that here is a new and wonderful sea carrying on its surface icebergs of varient sizes, shapes and colours, ranging from white to bluish green.

The Foster Glacier with its rugged ridges of opalesque ice, crenalated by the summer sun, affords a magnificent sight, as also does the adjoining extensive Mendenhal Glacier.

TREADWELL GOLD MINES:

The steamer next enters Gastineau Channel with Douglas Island on the left, and soon comes in sight of Treadwell, where are located the largest gold quartz mills in the World, there being 900 stamps in operation day and night. Immense profits have already been realised and millions of dollars worth of ore are still in sight. The roar of the mills may be heard for miles, because more than 2,000 mortar shoes stamp, collectively, 180,000 times per minute. A visit to the stamp mill is one of the sights and experiences of a lifetime.

JUNEAU:

A short distance from Treadwell is Douglas, the residential district for Treadwell. About a mile further north is the prosperous and far-famed City of Juneau, at the head of navigation in Gastineau Channel. It is decidedly the most important port in South-eastern Alaska, and well worth a walk round whilst the steamer stops.

LYNN CANAL:

Leaving Juneau the course rounds toward the narrow but calm waters of Lynn Canal. The land with its towering snow-clad mountains draws close as if resisting invasion into the secret wonders of this majestic scenery. The mountains—huge nature built sky-scrapers—are heavily timbered with abundant foliage to their snow-line—beyond that snow and ice reign supreme, defying even the ardour of the sun. Valleys on every side contain vast glaciers of ice, and the peaks which rise sheer above them are snow mantled, summer and winter. Ice fields between the mountain tops glisten and crevasse in majestic motion, and when the Midnight Sun sheds all its glory on the shimmering mass of ice, many weird northern scenes are observed and wonderful mirages are formed. Sometimes the steamer is confronted by ice-bergs which demand a right-of-way, and then slip silently by, whilst their passage fills the observer with an awe never felt before. These monarchs of the northern seas glide onward in stately pride, leaving an everlasting impression on the minds of those who are fortunate enough to behold their beauty.

SKAGWAY:

Straight away up Lynn Canal the steamer wends its way to Skagway, the head port of navigation. This city is the terminus of the White Pass and Yukon Railroad, which is richer in scenic wonders of its peculiar kind than any other in the World. Snow peaks abruptly ascend close around the town, and with the aid of the Midnight Sun create scenery that is beyond description. This town is very interesting. Side trips in every direction are possible, and from fishing to mountain and glacier climbing, one's inclination may be entirely satisfied.

The steamers remain at the Skagway wharf long enough to allow passengers the privilege of making the round trip to the summit of the White Pass by the White Pass and Yukon Railroad. And if there is a sufficient number to warrant the delay, the trip in as far as White Horse may be made.

The climate of South-eastern Alaska, about sea-level, is much milder than one would expect at Skagway's 60 deg. latitude, where the writer saw a pansy flower in the open garden towards the end of January, 1908, when the winter was exceptionally mild.

MUIR GLACIER:

The super-abundance of wild strawberries and bright flowers along the great Glacial moraine, and even near the edge of the high ice-cliffs of the Muir and other glaciers in Glacier Bay to the west of Skagway, are an agreeable source of surprise and admiration to the ever-increasing numbers of intelligent people who take this bracing and restful summer tour up the Coast to renew their energies and enlarge their views of life.

The magnificent and impressive scenery in Glacier Bay as seen on the side trip from Juneau to the Muir, etc., glaciers, is beyond adequate description.

The vast moraines at the entry, strongly marked evidences of erosion, on Willoughby and other Islands, the site of the Indian village swept away about the year 1818 by the great wave created by the thunderous "calving" of the ice-berg from the Muir Glacier's ice cliff, then located near North Marble Island (since when it has melted back a distance of more than 20 miles), impress us all the more whilst we steam on that extra 20 miles to the front of that stupendous mass of ice, which, though only about two miles wide where it breaks into the sea, covers more than 500 square miles above the shore with ice, spreading over the intervening range and dipping down to the Lynn Canal, as the finger-like Davidson Glacier, to be seen on our left as the steamer approaches Skagway.

The CHART of GLACIER BAY, in SOUTH-EASTERN ALASKA, is reproduced on Exhibit 4, by kind permission of the Superintendent of the Coast and Geodetic Survey Department of the United States Government, who also kindly outlined, in red, upon the old Chart No. 3,095, "the shorelines adjacent to the various Glaciers and the glacier-fronts, as taken from the Survey of 1907," in accordance with his letter of 11th June, 1909, since deposited with the original chart, in the Provincial Museum at Victoria.

The original chart was compiled from the joint surveys made by the United States and Canadian Boundary Commission, between the years of 1884 and

1895, the mean date of which being taken as 1890, shows the extent of the Sea Inlets within Glacier Bay about that year.

GREAT RECESSION OF GLACIERS IN GLACIER BAY:

The Black Areas upon the chart as reproduced, cover the areas which though overlaid by ice (apparently more than 500 feet thick) when the Alaskan Boundary Commission surveyed around Glacier Bay during the years mid-dating 1890, were found to be bared of ice in the year 1907, having melted back at the extraordinary rate of about half a mile per year in the case of the two largest glaciers—the "Muir" and "Grand Pacific," both of which receded about $8\frac{1}{2}$ miles during those 17 years.

We thus have definite records of the terminal movement made by all the large glaciers discharging into Glacier Bay, which, collectively, have receded about 2,054 acres per year, as detailed in the corner of the chart.

Muir	Glacier, about 12,800 acres receded.		
Rendu	"	"	360
Grand Pacific	"	"	14,860
John Hopkins	"	"	5,620
Hugh Miller	"	"	344
Charpentier	"	"	1,180
Total recessions			36,164
Less Queen and Gekie advances,			
only equalling 3 per cent. of			
the recessions			1,240
NET RECESSION,			34,924
in 17 years, averaging 2,054 acres per year.			

That vast recession authenticated by the best independent authorities, is confirmed by the records of Vancouver's Charts, the traditions of the Indians, the observations of Captain George and others; though the locations of the ice-front at those recorded stages is vague—yielding rates varying from one mile to one-seventh of a mile per year, as indicated by the arrows on Exhibit 4—though the average rate appears to be a little over one-third of a mile per year, between the 1794-year line on Vancouver's Chart and the 1890 chart's record of the Muir Glacier's ice-front.

There is a possibility that, careful as Vancouver was, he may have been barred out by ice-floes. The Indian record seems unreliable, through being "measured in lives" and interpreted too far back.

But all agree in the main fact of the great recession so emphatically evidenced by the average of 2,054 acres, or more than three square miles, bared each year since 1890.

GLACIAL ADVANCES ARE RARE AND SLIGHT:

In the left, lower corner of the Glacial Bay Chart are detailed the 36,164 acres of recession, from which the two slight "advances" of the Carroll and Wood Glaciers only total 1,240 acres—a mere three per cent. of the recessions—due to special causes that lack of space forbids our explaining here, though they seem mainly due to the interference of the "Nunataks" and dividing ridges being varied whilst the ice thins down, as temporarily experienced in the case of the Asulkan, near Glacier, British Columbia. The Brady Glacier has also temporarily advanced.



YAAK BAY in ALASKA, showing the growth of Trees along the Coast.

GLACIERS MEASURE CLIMATIC CHANGES OF MEAN ANNUAL TEMPERATURE, MUCH MORE MINUTELY THAN THERMOMETER RECORDS:

The rate of recession in the northern part of British Columbia and southern part of Alaska is increasing:—

1st. Because, as the level of the lower parts of the glaciers thins down, the forefoot or tongue of the ice melts back more rapidly as there is less for the same mean annual temperature to melt:

2nd. Even the slightest change in latitude affects the mean annual temperature many thousand times more than our ever-varying thermometers can register, as a very minute dip southwards draws increased heat during every hour of the year:

3rd. As the ice bares from the land which has been in cold storage so many centuries, the sun rays heat it so that it rapidly accumulates a tempering effect exerted around the ice-front:

4th. Within Glacier Bay the receding ice strengthens the flow of the tides, which undermine the ice-front more rapidly each year by their wash:

5th. The greater inflow of the Pacific water increases the temperature of the water in Glacier Bay, etc., as the proportion of salt water increases.

All these co-operate to yearly raise the temperature along the North-west Coast.

Similarly those factors modified by the difference in the direction and nearness of the mountains, approximately apply to the 900 miles Coast-length of the western side of British Columbia, where the abundant moisture

(as may be noted by the green-shaded zone on Map 6), by the action of its latent heat there liberated, further expedites the rate of climatic change.

RECESSION EXTENDING OVER THE YUKON, ETC.:

Those combined forces are not only operating around Glacier Bay, but throughout British Columbia, Alberta, the Yukon and Alaska—especially above the 55th degree of latitude, at which the Climatic Zones on Map 6 are cut off.

Those agencies are further aided by the increasing heat those Territories derive direct from the sun's rays, which warm the land more, now that the fog and mist that formerly resulted from the larger area of melting ice has yearly been reduced and so let in the sunshine.

Further, the longer hours of the vital summer sunshine immensely aid that improving climatic force, whilst the consequent increasing growth of vegetation further develops a milder climate more rapidly, as the approximate 20-mile rate of the yearly advance of the great "Wheat Belt" northward indicates.

CENTRAL CANADA WAS COVERED BY ICE:

Not many thousand years ago Central Canada was covered by ice, as the skulls of walrus, etc., found under the prairie soil of Manitoba prove, and the rate of the recession of Niagara Falls clearly demonstrates, as first pointed out by Professor Geo. Frederick Wright, of Oberlin, whose careful investigations in 1899 and 1900 through Siberia, etc., also established the fact that Northern Asia was not glaciated when Northern Europe and America were under the Polar Ice-cap.

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Those investigations exploded the plausible Croll theory of the Arctic Ice-cap having encircled the Northern Hemisphere down to 40 deg. of latitude, and led to the Ancient Astronomic and later Glacial investigations, which resulted in evidences set forth by the writer on pages 210 to 252 of the "Rational Almanac"—published by Bemrose & Sons, London—that details some of the more prominent evidences of this world-wide change of climate, by which the ever-beneficent forces of the Earth progressively develop its surface.

BRITISH COLUMBIA'S ZONES OF CLIMATE:

The Pacific winds, saturated with moisture, come in contact with the Island and Coast Ranges, to get over which they are pressed upwards, losing one degree of heat per 180 feet ascended, so that to get over 6,000 feet brings the temperature 33 degrees lower, or if raised to 8,000 feet the reduction by 14 degrees lowers the point of precipitation when rain or snow is precipitated from the clouds, till they pass the Cascade Range, etc., between which and the Selkirk Mountains lies a lower area, named the "Dry Belt," because rain seldom falls therein, owing to there being no high mountains in the path of the prevailing winds till the Selkirk and Rocky Mountains are reached.

Those two mountain chains rising to between 10,000 and 13,000 feet finally precipitate the remainder of the moisture on their snowy summits, after which the westerly winds being pressed down the Albertan slopes of the Rockies as dry winds increasing in temperature as they descend, then drift across the lakes and rivers of Central Canada and Hudson Bay, licking up the moisture

so rapidly that their effect can only be fully appreciated by persons who have watched the absorbing power of those warm "Chinook winds" as they descend the Eastern Slopes of the Rocky Mountains and sweep over Alberta, causing the thin snow on the Western Prairies to vanish like a cloud.

HOW GREENLAND'S ICE-CAP IS BEING RAISED:

Reference to the "Climatic Sketch Map" indicates the relative position of "Greenland's Icy Mountains," whilst the "Relief-Map," on the lower part of Exhibit 1, shows by the upper arrow indicator the north-easterly direction of the prevailing winds which become saturated with moisture by the time they pass over the low, swampy territory as they approach Hudson Bay, down the more than 1,000 miles of uninterrupted slope down from the Rocky Mountains.

About 1,500 miles further across Hudson Bay and Baffin Bay, the vast Arctic Ice-cap of Greenland rises about 8,000 to 10,000 feet high, as a tremendous ice-plateau or shield-shaped continent of ice. That causes those saturated winds to rise and there precipitate their moisture as snow within the Arctic Circle, where it cannot be melted, therefore Greenland's climate continuously accumulates and forms it into heavy Glacial Ice, which—as Dr. Nansen's explorations and Dr. Rink's investigations prove—spreads, and flows at the rate of 40 feet per day throughout the year, irrespective of the seasons, over that continental area of more than one-sixteenth the size of North America, including Mexico and Alaska.

The stupendous weight of that vast continent of ice cannot be comprehended through figures, but may be more easily understood when we consider that its average thickness, approximating 8,000 feet, would suffice to cover the whole area of North America, including Alaska and Mexico, with a crushing ice-sheet about 500 feet thick, exerting a pressure of about 13 tons per square foot, or more than 200 tons per square foot in Greenland.

AMAZING WEIGHT AND EFFECT OF GREENLAND'S ICE:

This amazing weight developing in Greenland is not counter-balanced by any corresponding mass of either land or ice on the Asiatic side of the Arctic Regions, as Dr. Nansen's drift voyage in the "Fram" through the Behring Sea and the "Farthest North" to Nova Zembla proved that over the vast Arctic Sea, the sea-formed ice-packs seldom rise to more than 30 feet in thickness, hence there is comparatively little in the Arctic Regions to counteract the great "Earthtiling" force exerted by the stupendous gravitational weight of Greenland's ice, which tends to make the Earth's crust slide around its denser core, down the 45th meridian through the mid-Atlantic Ocean, and raise Northern Siberia further within the Arctic Circle, and all that side of the World up the 135th meridian through between China and Japan, both of which nations are being braced up to greater energy by their colder climatic change, whilst the races of Southern Europe and the lower parts of the United States appear to be experiencing the enervating effects of the lowering climatic conditions as they are being very slowly drifted southwards.

THE WORLD'S EVERLASTING SAFE-GUARDS:

The great weight of the broad but comparatively low expanse of Asia and Africa apparently tends to tilt the slide of the Earth's crust slightly towards Africa, but that seems largely counter-balanced by the Earth's natural and easy adjustment of water aggregating in the vast expanse of the Pacific and Indian Oceans, together with the flatter and more evenly distributed ice-cap of the South Pole.

The pressure of the ice-cap tends to flatten down the polar areas which appear to be weakened of inside support by the centrifugal force of the immensely weightier core of the Earth being rotatively exerted towards the maintenance and steady adjustment of the Equatorial protuberance, which, having a diameter 26 miles greater than that of the Polar Axis, exercises a gyroscopic effect **ABSOLUTELY ASSURING THE GENERAL STABILITY OF THE EARTH**, whilst the bending crust is being very slowly re-adjusted round the core by earthquake adjustments which the writer, after protracted investigations into the extensive evidences of changing climates considers, may be primarily caused by the gravitational force of Greenland's wonderful weight of ice, being exerted in unison with the Earth's interior forces in moulding the ever-changing, slow, but sure adjustment of the World's surface.

The various climates of the World appear from Glacial and other evidences indicated herein, to be undergoing a continuance of that perennial climatic change by which those greatest forces of nature have ever so gloriously varied the crust and renewed the surface-soil of the Earth during all the ages denoted by geology and history.



ESQUIMALT HARBOUR.—ONE of the MANY SPLENDID NATURAL HARBOURS which abound along the SHELTERED COAST of BRITISH COLUMBIA, saving the Cost of Docks, etc., which other Countries have to build for loading and discharging cargo steamers.

MEASURING THE RATE OF CLIMATIC PROGRESSION:

The limited indications of climatic change observable through the recession of the Glaciers in the Rocky Mountains, and still more distinctly evidenced by the retreat of the greater Glaciers up the Coast of British Columbia and Alaska, cannot alone enable us to measure the change of latitude, but the "Publications of the Earthquake Investigation Committee," No. 18, page 16, "shows that nearly all the destructive earthquakes occurred approximately at those epochs when the (changing) latitude was at a maximum or minimum." Their diagrams of the Japanese Astronomers co-ordinated with the earthquake records, proved that the Earth re-adjusted its constantly changing latitude by earthquakes, within a range of rather more than 21 yards.

The interesting seismographic investigations made in Victoria by Mr. F. Napier Denison, of the Meteorological Office, further evidence that "tilting of the Earth," though the extent of that part of it caused by the gravitation of the Polar Ice, has not yet been determined.

Mr. Comstock, the American observer, indicated 150 yards, but the measure of the change deduced by the writer's investigations into the Astronomical records devised by the great Astronomers of Egypt, who, about 5,000 years ago, built the Pyramids as their observatories, (sloped to the Equinoctial elevations of the Sun crossing in all astronomy) prove that the Earth's tilt there has averaged about 150 yards per year during 5,000 years. Hence we may infer that the rate of change varies and is now less than in ancient times.

RATE OF CHANGE IS VERY SLOW:

Even if the maximum recorded rate of 150 yards was continued every year, the Earth would require 7,040 years to adjust its crust whilst being tilted through the 600 miles length of Great Britain; or, 9,387 years for the southern trend of latitude to pass through the 800 miles length of British Columbia.

THE CHANGING CLIMATE IS MATERIALLY BENEFITTING CANADA NOW:

Though the present indications lead to the expectation that the change is now much less and likely to vary during future years, steady as the lower part of Greenland dips below the Arctic Circle, and so leaving less high land within upon which alone the Glacial ice can accumulate, the consequent benefits developing in Canada are far greater than most people imagine.

Reference to the record of "Possible Hours of Summer Sunshine," denoted in hours down the 124th meridian, on Map 6, demonstrates the fact, that during the summer months—which are most valuable for maturing crops, as also during the spring months—when vegetation grows most rapidly, the northern portion of British Columbia enjoys two hours per day more sunlight than the South, and that Prince Rupert will have one hour more summer light than its competitors, Vancouver and Victoria, though one hour less will result in winter.

THE NORTH-WEST CLIMATE CHANGES FAR MORE RAPIDLY THAN ITS LATITUDES:

But with vegetation, upon which the ultimate prosperity of every country depends, the longer darkness

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conserves the energies of plant life by resting the soil and in the agriculturalist's interests checks the growth of weeds, especially when Fall Wheat, etc., are protected by snow.

Whilst watching the extraordinary rapid growth of Canadian vegetation with that able and reliable observer Professor Macoun, at Ottawa, in the spring of 1908, the buds of the maple trees were seen to burst into life and flower within four days, because the sap had been held in check by the late spring and rose rapidly as the moisture from the melting snow, in nature's resourceful way, co-operated with the increasing seasonal heat.

CLIMATIC ADVANTAGES CONSTITUTE THE GREATEST ASSET AND MOST VITAL FACTOR IN THE DEVELOPMENT OF NATIONS:

Few persons realise the supreme influence of climate upon individual and national health, happiness and prosperity. Yet history unmistakably proves that the comparative vigour of human races largely depends upon climatic conditions, and that is emphatically confirmed by the best medical authorities and our personal experiences of national life all over the World.

There can hardly be any doubt about that most important fact, when we read how the stalwart, northern-bred Goths of Europe overwhelmed the Roman Empire, and the Tartars of Siberia conquered the Chinese.

We know, beyond a doubt, that the races of Northern Europe dominate that Continent, because they are more energetic and progressive than the Southern races of Turks, Greeks, Italians, Spaniards, etc.

Similarly the Northern Asiatic races of Japanese and Tartar Chinese, being more vigorous though far less numerous, impress their power on the vast millions of the Southern Chinese, as also do the more progressive people of the northern part of the United States dominate the more indolent races in the South—through the superior energy so largely developed by the more bracing northern climate which establishes bodily and mental strength through the surrounding north temperate zone of climatic conditions, there found to be most suitable for the full development of human life—just as the greatest trees grow along the Pacific Coast where climatic conditions for permanent growth are most suitable.

VIGOUR OF RACES INCREASES IN COLDER LATITUDES:

Both individuals and nations improve as they advance into the Cold Temperate Zone, and tend to lose energy as they approach the Tropics.

Plain evidence of that natural law governing human life, can be seen during our journey up the Coast, as the Native races improve as we go northwards. The Haida Indians are far more vigorous than the Siwash Indians of the South, whilst the Eskimos of Alaska are more vigorous than the Indians.

The same ranges of improvement characterise the Central Canadian Indians, who improve as they extend northwards.

RECOLLECTIONS AND ANTICIPATIONS:

The tour up the Coast furnishes delightful recollections during later years, especially if the visitor has first been so fortunate as to travel leisurely through the Rocky and Selkirk Mountains, on the Canadian Pacific

Railway, and by short side-trips from those havens of rest in the hotels at Field and Glacier, quietly absorb the full significance of that most wonderful and mighty of nature's directly observable phenomena in glacial action.

There may be seen the small glaciers which really are the tail ends of the slowly receding Glaciation that, probably about 20,000 years ago, spread over Canada and as far into the United States as New York, across the 40th parallel of latitude indicated on the Climatic Sketch Map. Then, here, along the 7,000 mile shore line of British Columbia's mainland, over the rounded hills and mountains and through the deep cut fiords and channels of this Coast, may be seen the greatest results of those erosive forces of Nature, which laid the fertile soil of Canada; whilst further north, during this trip, we have seen in the Taku Glacier, the "Muir" and other great glaciers of Glacier Bay, etc. (within Southern Alaska), the fuller majesty of that powerful force which is now operating with such tremendous effect in Greenland, that the gravitational weight of that continental accumulation of glacial ice is assuredly changing and varying the climates of the world, as evidenced by climatic changes which may be most clearly seen developing along this Coast, to British Columbia's supreme advantage.

PRIME FACTORS DEVELOPING A BOUNTIFUL CLIMATE:

The chief essentials for the development of a bountiful climate, upon which the plenteousness of vegetable and animal life along with healthy and vigorous human life depend, are:—

1. Location in the Cold Temperate Zone.

2. Proximity to the Sea.

3. Prevalence of moisture-laden Westerly Winds—that direction being primarily caused by the Earth's rotation.

4. Well distributed mountains to precipitate the moisture.

5. Rich land which has matured through—

- (a.) The atmospheric disintegration of the rocks, aided by rain and flowing waters:
- (b.) The Glacial erosion—a far more powerful factor than has hitherto been understood—as explained on Exhibits 3 and 4:
- (c.) The annual decay of vegetation throughout past ages, during Nature's ceaseless process of using up its matter, whilst renewing energy and extending life.

With all these, and unsurpassable mineral and other Natural Resources, British Columbia has been profusely endowed by Nature, which here gives such vigour to life, as only those can realise who have experienced it, whilst viewing the prolific growth of vegetation, ranging up to the snow-line of the mountains.

The vigour of the timber growth is typical of the increased vitality this energising climate develops in its people. That prolific growth is developing an asset of greatly increasing value to the Province, as evidenced below:—

PROVINCIAL REVENUE DERIVED FROM TIMBER:

From the 182,750,000 acres of forest and woodland in this Province, about 6,000,000 acres of timber lands are in the 40-mile Railway Belt and being disposed of by

ENGLISH BY
FREDERICK L. BAKER



See: Hill Park, Victoria, B.C.

WILLIAMSON BROTHERS COAST.

Y. d. C.



GARDEN SCENE FROM A HOME IN VICTORIA.

the Dominion Government. The British Columbian Government have already disposed of about—

10,000,000 acres, by Timber Licences, yielding	\$2,282,624
800,000 acres, by Timber Leases, yielding	83,045
1,250,000 acres, by Crown Grants, leaving an immense area available for future development. Meantime, holders of licences and leases pay beyond the above amounts a royalty of 50c. per 1,000 board feet.....	255,095

Revenue in year 1908, direct from timber. . \$2,620,764

That revenue is being considerably increased during 1909, and will be increasingly profitable to the Province for the opening up of the country by new roads, trails bridges, and other public works during future years, thus lightening taxation, whilst developing the Province, as the permanent timber policy of the present Administration towards conserving these valuable forests is being steadily developed through the recently appointed Forestry Commission, and efforts are now being well directed to conserve the water, mineral, and other natural resources of the Province.

These considerations press home the fact that British Columbia is a most desirable country to live in—to live long and happily under ideal conditions.

THE IDEAL COUNTRY FOR HOME LIFE:

His Excellency Earl Grey, Governor-General of Canada, who recently visited British Columbia, said:—

"Gentlemen, here is a state of things which appears to offer the opportunity of living under such ideal conditions as struggling humanity has only succeeded in reaching in one or two of the most favoured spots upon the earth. There are thousands of families living in England to-day, families of refinement, culture and distinction, families such as you would welcome among you with both arms, who would be only too glad to come."

The advantages of the climate and resources of British Columbia will be evident to all who visit this delightful country; but the great national safeguards of pure and healthy home-life are only just beginning to be realised as best conserved within small towns and cities, which have hitherto best thriven in the sheltered valleys of Switzerland, Scotland and Norway.

British Columbia is surely being safeguarded by its mountains and valleys, from being handicapped later by cumberously, large cities. It is becoming a country of small and prosperous cities, like Nelson and Vernon, healthily scattered throughout the Province, which produces abundance everywhere.

Just as Switzerland has developed the happiest and most contented people in the World, so British Columbia (so like Switzerland but vastly larger) is destined to develop the happiest of people and become the playground and health resort of the World.

VICTORIA, B. C.

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1909.





PANORAMIC VIEW of the SELKIRK MOUNTAINS.



Between ROGERS PASS, by GLACIER, and the ASULKAN PASS.